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CHINA
A COMMERCIAL AND INDUSTRIAL
HANDBOOK

BY

JULEAN ARNOLD

Commercial Attaché

AMERICAN CONSULAR OFFICERS, and
OTHER CONTRIBUTORS

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LETTER OF SUBMITTAL

DEPARTMENT OF COMMERCE,
BUREAU OF FOREIGN AND DOMESTIC COMMERCE,
Washington, October 4, 1926.

SIR: There is submitted herewith a Commercial Handbook of China, prepared under the supervision of Julean Arnold, United States commercial attaché at Peking. This book is designed to supersede the current handbook on China, which was prepared by Mr. Arnold and issued by the Bureau of Foreign and Domestic Commerce in 1919.

Publication of the present work is in answer to a large and widespread demand. Interest in China in this day has become world-wide, not so much because of the political movements which have drawn public attention to that country as because of a general recognition of China's growing importance in the commercial and economic development of the trading nations throughout the world. Competition for China's trade has grown keener with every year since the World War. In 1914 China's total foreign trade was valued at \$604,600,000; in 1920, the peak year in valuation, because of the high price of silver, its gold value exceeded \$1,616,000,000; and in 1924 it amounted to \$1,450,000,000, an increase of nearly 150 per cent in 10 years.

Americans are especially interested in China's development, not alone because of the friendly relations that have uniformly existed between the two peoples from their earliest contact, but because their commercial intercourse in the last 10 years has developed almost unprecedentedly, and the future seems to promise an even greater measure of economic relations between them. Our trade with China totaled a value of but \$64,000,000 in 1914; in 1920 it reached \$338,500,000; and in 1925, in spite of seriously detrimental conditions, it still exceeded a value of \$263,000,000. China, next to Japan, is our best Asiatic customer, and one of our foremost sources of those raw materials which we have been unable to produce for ourselves, such as raw silk, tea, and wood oil.

It has been recognized as of first importance, then, that American merchants and manufacturers should have at hand and in convenient form as comprehensive and recent information about China as could be compiled. This book is an earnest effort to supply that need. In

its preparation Mr. Arnold, in addition to his own more than 20 years of experience in China, has had the hearty cooperation of all our consular officers in China and of the several authorities whose names head many of the special articles it contains. The valuable assistance of each of them is hereby gratefully acknowledged.

Much of the general information contained in the two volumes of the earlier handbook has been retained in the present work, which has been condensed into one volume. In addition there are a number of new subjects, as of more recent significance, considered in detail, notably that of the incorporation of American firms in China, with special reference to the China Trade Act.

In each instance the information given is believed to be of real practical value, and it is the earnest hope of the Bureau that this handbook will afford to the exporters of the United States a background for their study of the basic trade potentialities of the important and ever-interesting Republic of China.

The colored map at the end of the volume has been revised and corrected by the publishers in cooperation with the Bureau of Foreign and Domestic Commerce.

Respectfully,

JULIUS KLEIN,

Director of Bureau.

To Hon. HERBERT HOOVER,

Secretary of Commerce.

COMMERCIAL HANDBOOK OF CHINA

PART I

BRIEF GEOGRAPHICAL DESCRIPTION

By Commercial Attaché Julean Arnold

The distance from the coast of China to the coast of California is about twice the distance from San Francisco to New York. The northern latitude of China's territory corresponds with a line running through southern Canada, and the southern latitude with a line traversing southern Mexico. From east to west China extends over a distance similar to that between the Atlantic and Pacific coasts of the United States.

AREA AND POPULATION

Since China has not yet carried out a proper land survey or census, the area and population of its territory can be given only as estimates, as in the following table (figures for certain other countries are added for purposes of comparison) :

Regions	Area in square miles	Population	
		Total	Density per square mile
China proper, including the three Manchurian Provinces.....	1,897,000	436,000,000	238
Mongolia.....	1,370,000	2,500,000	2
Chinese Turkestan.....	550,000	1,200,000	2
Tibet.....	465,000	6,500,000	14
Total, Chinese territory.....	4,282,000	446,200,000	104
South America.....	6,850,000	60,000,000	8
United States, exclusive of dependencies.....	3,620,000	110,000,000	30
Japanese Empire.....	260,000	80,000,000	307
France (continental).....	207,000	40,000,000	150

The population of the great Yangtze Basin is estimated at 200,000,000. The Yangtze Delta, comprising an area of 50,000 square miles, or about that of the State of Illinois, has an estimated population of 40,000,000. Two-thirds of China's population is concentrated in one-third of its area, being densest along rivers and in coastal regions. Mongolia, Turkestan, and the three Manchurian Provinces offer vast areas of fertile lands for settlement and mineral wealth for development, but lack of adequate means of transporta-

tion and protection against brigandage have discouraged settlement of these sections.

With the exception of the area comprising the great central plain formed by the valleys of the Yellow and Yangtze Rivers, China proper is mountainous or hilly.

China is probably one of the best watered countries on the globe. The Yangtze River, about 3,200 miles long, and the Yellow River, about 2,600 miles, rise in Tibet and central Asia and flow eastward across Central and North China, emptying into the Pacific. The West River, about 1,200 miles long, rises in Yunnan Plateau in southeastern China and flows through South China into the Pacific. In addition to these, there are numerous smaller streams and canals, especially in the south.

CLIMATE

Climatically, China enjoys two distinct seasons, summer and winter, with short autumn and spring seasons. At Tientsin or Peking, which are in the same latitude as Washington, D. C., the thermometer falls to 4° F. and rises in summer to 100° F., with comparatively little humidity. At Shanghai, which lies in a latitude between that of San Diego and New Orleans, the winter temperature reaches 15° F. and the summer temperature 98° F., but with considerable humidity. At Canton, which lies in the same latitude as Habana, Cuba, the temperature rarely falls in the winter below 32° F. and rises in the summer to a maximum of about 98° F., with much humidity.

Generally speaking, considerable rain falls in China during the spring and summer months. The winters in the north are dry and cold, often with no rainfall between the months of October and April. The winters of the central or Yangtze River region are cold and damp, while those of the south are comparatively dry and mild. The autumn season is generally pleasant throughout China. In the north dust storms are common during the spring months.

The average annual rainfall in the north is 25 inches, in the Yangtze region 45 inches, and in Kwangtung in the south 80 inches.

DISTANCES FROM SHANGHAI

Following is a table of distances from Shanghai (by rail to Peking, to all other points by steamer), the commercial metropolis of China, to nine important cities:

Shanghai to—	Traveling time		Miles	Corresponding distance in United States: New York to—
	Days	Hours		
Peking.....	—	36	830	Indianapolis.
Hongkong.....	2½-3	—	900	Chicago.
Hankow.....	3	—	600	Cleveland.
Chungking.....	14	—	1,425	Omaha.
Nagasaki.....	—	30	410	Augusta, Me.
Vladivostok.....	4	—	1,000	Milwaukee.
Kobe.....	2	—	750	Cincinnati.
Yokohama.....	5	—	1,100	Tampa, Fla.
New York.....	20-27	—	9,920	—

STATISTICS RELATING TO PROVINCES

The following table gives certain essential data concerning the Provinces of China:

Province	Area in square miles	Population according to Chinese Post Office estimate, 1922	Population per square mile	Capital of Province
Anhui	54,826	19,850,000	362	Anking.
Chekiang	36,680	22,000,000	601	Hangchow.
Chihli	115,830	34,200,000	295	Paoiatingfu.
Fukien	46,332	13,200,000	284	Foochow.
Honan	67,954	30,850,000	454	Kaileng.
Hunan	83,398	28,450,000	341	Changsha.
Hupei	71,428	27,150,000	380	Wuchang.
Kansu	125,483	6,000,000	47	Lanchowfu
Kiangsi	69,498	24,500,000	352	Nanchang.
Kiangsu	38,610	33,800,000	875	Nanking.
Kwangsi	77,220	12,250,000	159	Kweilin.
Kwangtung	100,000	37,150,000	372	Canton.
Kweichow	67,182	11,100,000	167	Kweiyang.
Shansi	81,853	11,000,000	134	Taiyuanfu.
Shantung	55,984	30,800,000	552	Tsinan.
Shensi	75,290	9,450,000	125	Sianfu.
Szechwan	218,533	49,800,000	228	Chengtu.
Yunnan	146,714	9,850,000	67	Yunnanfu.
Shengking (Manchuria)	363,700	22,100,000	61	Mukden.
Kirin (Manchuria)				Kirin.
Heilungkiang (Manchuria)				Tsitsihar.
Total	1,896,515	433,500,000	238	
Sinkiang	550,000	2,500,000	2	
Mongolia	1,370,000	2,500,000	2	Urga.
Tibet (Chinese estimate)	465,000	6,500,000	14	Lhasa.
Grand total	4,282,000	445,000,000	104	

The figures pertaining to area and population as given in the foregoing table are taken from the Chinese Post Office estimates of 1922. Where these figures conflict with estimates given elsewhere in this book, the reader is at liberty to make his own choice—for China has as yet taken no official census.

The sections below give brief summaries of general features in all the Provinces and dependencies of China. More detailed descriptions will be found in other parts of this book in the chapters devoted to the American consular districts.

PROVINCE OF ANHWEI

Area.—55,000 square miles (about equal to the State of Iowa).

Latitude.—Corresponds to that of Mississippi.

Population.—20,000,000; 360 per square mile; densest in north.

Topography.—South of Yangtze, mountainous; central section, fertile, well-watered plain; north of Hwai River plains are subject to droughts and inundations.

Agriculture.—Rice, cotton, wheat, and tea are raised. The central section exports large quantities of rice; the north exports wheat, beans, sorghum, tobacco, and millet; the south exports tea and silk exclusively.

Minerals.—Coal is widely distributed but is of low quality. Iron deposits are large and of good quality.

Industries.—Anhwei supplies a large proportion of China's native ink. Native paper is produced abundantly in the south. Wuhu has several modern rice and flour mills and is destined to become an important industrial city.

Communications.—Rivers: Yangtze (ocean-going steamers), Hwai, and tributaries. Railways: Tientsin-Pukow line through northeastern sections; pro-

jected line from Wuhu southwest to Nanchang in Kiangsi. Post offices, 123. Telegraph stations, 36.

Cities.—Of more than 100,000 population: Anking (capital), Wuhu, Pochow. Other important cities: Pengpu, Tatung, Hweichow, and Luchowfu.

Treaty ports.—Wuhu; Pengpu.

Language and characteristics of natives.—Mandarin is spoken. The natives are simple, hardworking, and peaceable.

American interests.—Under jurisdiction of Nanking consulate.

PROVINCE OF CHEKIANG

Area.—37,000 square miles (about the size of the State of Indiana).

Latitude.—Corresponds to that of the southern half of Texas.

Population.—22,000,000; 600 per square mile; densest in north and northeast.

Topography.—South and west mountainous; large fertile plains in the north; rich agriculturally.

Agriculture.—Rice, tea, silk, cotton, wheat, hemp, indigo, sugar, and fruits are produced. Rice is the principal crop. Tea is grown in the hills. Silk, for which the Province is noted, produces two crops. Cotton is increasing in importance, the districts between Shaohing and Ningpo producing an excellent quality in abundance.

Minerals.—There are coal, iron, alum, and soapstone deposits, but they are little developed.

Industries.—Silk culture and manufacture comprise the leading industry. Huchowfu produces the best raw silk and Hangchow the best silk cloth. There are in Ningpo three cotton mills with 55,000 spindles for the manufacture of cotton yarn, and 275 looms for weaving cotton cloth. Kashing is noted for its brass and copper ware. Fans, umbrellas, joss paper, and Chinese pens (brushes) are made in large quantities in Hangchow. Shaohing produces China's best samshu (rice wine), of which it shipped 6,000 tons in 1916. The soapstone ware of Wenchow is famous.

Communications.—Waterways: The Province is a network of rivers, canals, and creeks, navigable by native craft. There is a steamer service between Shanghai, Ningpo, and Wenchow. Railways: Shanghai-Hangchow-Ningpo; projected, Hangchow-Wuhu and Ningpo-Wenchow. Post offices: 107. Telegraph stations, 42.

Cities.—Hangchow (capital) 600,000 population. More than 100,000; Shaohing, Ningpo, Huchow. Other important cities: Lanchi, Kashing, Chuchow, Kihwafu.

Treaty ports.—Hangchow, Ningpo, Wenchow.

Language and characteristics of natives.—A form of Mandarin is spoken. The natives are enterprising; they are splendid seamen.

American interests.—Under the jurisdiction of the Shanghai consulate general.

PROVINCE OF CHIHLI

Area.—116,000 square miles (about the size of Arizona).

Latitude.—Corresponds to that of Illinois.

Population.—34,200,000; 300 per square mile; densest in plain toward the southwest.

Topography and climate.—Mountainous in north and west; great eastern plain is hot and very productive in summer owing to timely rains, but cold and subject to dust storms in winter, with streams frozen.

Agriculture.—Sorghum, millet, wheat, Indian corn, beans, cotton, hemp, peanuts, walnuts, and fruits constitute the main crops. Wheat is sown in the late fall and harvested in early summer, after which the other crops are planted, corn and beans being planted in the same fields. The cotton is grown on the higher land, is short staple, and finds a ready market in America for the manufacture of blankets.

Minerals.—There are deposits of coal (anthracite and bituminous), limestone, and salt. The Province is particularly rich in high-grade coal, with the largest mines in China worked by modern machinery and methods.

Industries.—Tientsin is a very important export and import center. There are wool-cleaning works, besides hydraulic presses for wool, jute, skins, rugs, and hides, in preparation for export; these are under foreign management. Coal mines, flour mills, cotton spinning and weaving mills, cement works, railway shops, and cigarette, match, woolen carpet, and tile factories are among the modern industries of North China.

Communications.—Waterways: Pei River and Grand Canal, navigable for small boats. Railways: Peking-Mukden, Tientsin-Pukow, Peking-Kalgan, Peking-Hankow, and Peking-Mentowkow. Post Offices, 191. Telegraph stations, 82.

Cities.—Tientsin, 1,300,000; Peking (national capital) 800,000; Paotingfu, 100,000.

Treaty ports.—Tientsin, Kalgan, Kweihwacheng, Hulutao, Chihfeng, Dolon nor, and Chinwangtao.

Language and characteristics of natives.—Northern Mandarin is spoken. The natives include Chinese, Mongols, and Manchus with predominance of Tartar blood.

American interests.—Under jurisdiction of Tientsin consulate general. The American Legation at Peking has jurisdiction over whole of China.

PROVINCE OF FUKIEN

Area.—46,000 square miles (about the size of the State of Mississippi).

Latitude.—Corresponds to that of southern half of Lower California.

Population.—13,000,000; 280 per square mile; densest along coast and in Min River Valley.

Topography and climate.—The Province is mountainous, the mountains running parallel with the coast. The coast is broken with many bays and three good harbors—Santauo, Foochow, and Amoy. The climate is semitropical.

Agriculture.—In order of their importance, the principal products are rice, timber, tea, fruits—of which oranges, olives, lunggans, litchis, and plums are the most important—bamboo shoots, sugar cane, wheat, and sweet potatoes.

Minerals.—The principal minerals now being worked are coal, talc, porcelain clay (kaolin), limestone, and iron. There are known deposits of molybdenum, gold, lead, silver, copper, and graphite not being worked.

Industries.—Next after agriculture, the principal industries are the milling and exporting of lumber; the manufacture of paper from bamboo pulp; the export of tea; the making of tinfoil, paper umbrellas, matches, and soap; fishing; and boat building. In the way of modern-type factories there are in Foochow a combined tannery and liquor distillery, a few camphor refineries, two small knitting mills making socks and towels, and a rubber factory which makes rubber soles for shoes. In Amoy there are two fruit canneries. From Amoy there is a large emigration of labor to the South Seas and to Singapore.

Communications.—Waterways: Coastwise trade, Amoy, Hinghwa, Foochow, and Santauo connected with Shanghai and Hongkong; foreign, Amoy and Foochow connected with Formosa and the Philippines. Min River is navigable to Foochow by small steamers, beyond Foochow to Shuikow by launches; beyond Shuikow by small boats. Railways: Amoy-Changchow. Approximately 40 per cent of transportation is carried on by human carriers, 40 per cent by nonpower boats, and 20 per cent by steamboats and railway. Post offices (first, second, and third class), 40. Telegraph stations, 20.

Cities.—Of more than 500,000: Foochow (capital). More than 100,000: Amoy. Other large cities: Changchow and Chuanchowfu. There are 22 other cities, each with population of more than 20,000.

Treaty ports.—Amoy, Foochow, and Santauo.

Language and local characteristics.—The Amoy, Foochow, and Southern Mandarin are the principal dialects. The natives of the southern part of the Province differ from the rest in being more adventurous. The natives of northern Fukien greatly dislike to leave their own local habitat.

American interests.—Under jurisdiction of Foochow consulate for north Fukien (approximately three-fifths of the Province) and of Amoy consulate (approximately two-fifths) for south Fukien.

PROVINCE OF HONAN

Area.—68,000 square miles (about the size of the State of Washington).

Latitude.—Compares with South Carolina.

Population.—30,850,000; 450 per square mile; slightly denser in north.

Topography and climate.—Hilly on western boundary, with plains elsewhere; floods of Yellow River a constant menace. Soil fertile. Climate: Summer hot, with considerable rainfall; winters cold and dry.

Agriculture.—Wheat, sorghum, beans, millet, sesame, Indian corn, rice, cotton, and peanuts are the principal products. Honan is becoming important for its cotton production.

Minerals.—Coal and iron are the principal minerals. The Peking Syndicate operates extensive coal-mining properties in Honan.

Industries.—Coal mining, brick making, and cotton manufacture constitute the main industries; otherwise mainly agricultural.

Communications.—Waterways: Of the three rivers—Yellow, Hwai, and Wei—only the Yellow is navigable, and that one only in sections. Railways: Peking-Hankow, and the Lung-Hai, extending east and west. Extensive cart traffic is carried on over poor country roads. Post offices, 149. Telegraph stations, 51.

Cities.—Of more than 100,000 population: Kaifeng (capital); Chengchow is rapidly becoming a city of importance in trade and industry and will soon be opened to foreign trade and residence; there are 12 cities with population exceeding 20,000.

Treaty ports.—It is anticipated that Chengchow will soon become a treaty port.

Language and characteristics of natives.—Mandarin is spoken. There are few immigrants from other Provinces and few native tribes.

American interests.—Under jurisdiction of Tientsin consulate general for region north of Yellow River and Hankow consulate general for territory south of river.

PROVINCE OF HUNAN

Area.—83,000 square miles (about that of Minnesota).

Latitude.—Corresponds to that of Florida.

Population.—29,000,000; 350 per square mile; densest in river valleys and around Tungting Lake.

Topography.—Mountainous, especially in west and south; Tungting Lake (75 by 60 miles) in northeast receives waters of four rivers. Plains lie south of Changsha.

Agriculture.—Probably no Province surpasses Hunan in agricultural wealth. Rice is the main crop. Tea, beans, ramie, sesame, bamboo, wood oil, vegetable tallow, cotton, tobacco, melons, fruits, and wheat are among its products. It also produces excellent pork.

Minerals.—There is abundant mineral wealth. Antimony, lead, zinc, coal, iron, manganese, tin, and quicksilver are the principal minerals. Hunan produces a large proportion of the world's supply of antimony.

Industries.—Mining is the main industry. Native paper from bamboo pulp, grass cloth, silk embroideries, and cotton nankeens are extensively manufactured. Hunan hams are shipped all over China. Bamboo manufactures are noted. Changsha is developing into an industrial center.

Communications.—Waterways: Steamer traffic on lake and between Changsha and Hankow. Siang, Lei, and Yuen Rivers are navigable, except during low-water season in winter. Railways: Changsha is connected by rail with Hankow and will be connected later with Canton. Hunan is connected by roads with neighboring Provinces. Post offices, 78. Telegraph stations, 51.

Cities.—Of more than 100,000 population: Changsha (capital), Changteh, and Sinangtan.

Treaty ports.—Changsha and Yochow.

Language and characteristics of natives.—The local Mandarin dialect is spoken. The natives are progressive, but distinctly provincial.

American interests.—Under jurisdiction of Changsha consulate.

PROVINCE OF HUPEH

Area.—71,000 square miles (about the size of Oklahoma).

Latitude.—Corresponds to that of the State of Louisiana.

Population.—27,100,000; 380 per square mile; densest on the plain.

Topography.—It is said of Hupeh that it is three parts hills, six parts water, and one part habitable land. The Yangtze and Han Rivers intersect the Province, and there are numerous lakes and canals.

Agriculture.—Rice, cotton, tea, and beans form the principal crops. Sesame, tobacco, wheat, ramie, and silk are also important products. Eggs and egg products, nutgalls, and vegetable and animal tallow figure in the export trade of Hupeh.

Minerals.—Iron and coal are the main minerals. The Tayeh iron mines of Hupeh are the largest in China.

Industries.—Iron and steel production is very important. Hankow is called the "Chicago of China." It is a great collection and distribution center.

Cotton mills, flour mills, cigarette factories, oil mills, iron works, egg-products plants, ore refineries, and cement plants are among its industries. The Province produces large quantities of fish. Hankow is the center of the tea industry in China. It is an important export center for cotton, wood oil, sesame, tobacco, hides and skins, tea, pig iron, raw silk, bristles, ramie, egg products, hemp, and nutgalls, listed in order of importance.

Communications.—Waterways: Ocean-going steamers to Hankow eight months in the year; river traffic between Hankow and upper Yangtze; Hankow and Changsha; and Hankow and Laohokow (on Han River). Railways: Peking-Hankow; Wuchang-Changsha (to be completed later to Canton); line projected from Hankow into Szechwan via Ichang (part of Hukuang system). A modern motor highway extending from Shasi to Siangyang, a distance of 160 miles, was completed in 1924. Provincial roads are numerous, but in poor condition. Post offices, 143. Telegraph stations, 49.

Cities.—Hankow, Wuchang, and Hanyang, the "Wuhan cities," have a combined population of 1,500,000. Hupeh has six other cities with more than 25,000 population.

Treaty ports.—Hankow, Ichang, Shasi.

Language of natives.—Mandarin is spoken. There are but few immigrants in the Province.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF KANSU

Area.—125,000 square miles (about that of New Mexico).

Latitude.—Corresponds to that of California.

Population.—6,000,000; 48 per square mile; most sparsely populated Province.

Topography and climate.—Mountains across Kansu northwest to southwest; south very mountainous; east and northeast a large, fertile, loess plateau; north wild and uninhabitable. Climate dry, with cold, dry winters.

Agriculture.—Wheat, millet, cotton, tobacco, fruits, and peanuts are the principal products. The Province is pastoral rather than agricultural; sheep and cattle are raised in large numbers.

Minerals.—Little is known regarding the mineral wealth.

Industries.—Sheep and cattle raising, and production of wool and hides constitute the main industries.

Communications.—Waterways: Tributaries of Yellow River navigable during summer season for short distances for small boats; in winter by ice rafts. No railways. Country roads adapted to cart traffic. Post offices, 48. Telegraph stations, 21.

Cities.—Lanchowfu (capital), population 500,000. Other important cities: Tsinchow, Siningfu, Liangchowfu.

Treaty ports.—None.

Language and characteristics of natives.—Western Mandarin is spoken. A large number of Mohammedans. There are some Mongols in the north.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF KIANGSI

Area.—68,000 square miles (about the size of the State of Missouri).

Latitude.—Corresponds to that of Florida.

Population.—24,500,000; 360 per square mile; densest around Poyang Lake and in Kan Valley.

Topography and climate.—Mountainous, except Poyang Lake Basin; country around lake, marshy; Kan River drains larger part of Province. Climate humid.

Agriculture.—Rice, tea, tobacco, bamboo, peanuts, fruits, indigo, and grains are the main products. Camphor trees are found in many places, but in an isolated way. Ramie is quite extensively grown.

Minerals.—There are deposits of coal and kaolin (China clay). The Ping-siang coal mines have an annual output of about a million tons.

Industries.—Coal mining and the manufacture of coke and briquets constitute a great industry at Pingsiang, where modern machinery and methods are employed. The porcelain industry of Kiangsi is ancient and far famed; with reorganization along modern lines, it could be made one of the very important

and profitable industries of China. About one-half of China's production of grass cloth is made in Kiangsi.

Communications.—Waterways: Steamers through Poyang Lake and Kan River to Nanchang; Kan River and tributaries navigable for native boats. Railways: Kiukiang-Nanchang, Pingsiang-Chuchow; line projected from Nanchang to Santuao or Swatow. The country roads are poor, and, most of the traffic being by water, 70 or 80 walled cities can be reached by boat the greater part of the year. Post offices, 96. Telegraph stations, 36.

Cities.—Of more than 100,000 population; Nanchang (capital), Kanchow, Kianfu, and Kingtehchen. Six other cities have population of more than 25,000.

Treaty port.—Kiukiang.

Language of natives.—Mandarin, except in the east, where a dialect of Fukienese is spoken.

American interests.—Under the jurisdiction of the Hankow consulate general.

PROVINCE OF KIANGSU

Area.—38,600 square miles (about the same as that of Kentucky).

Latitude.—Corresponds to that of Mississippi.

Population.—33,800,000; 880 per square mile; densest on Kaimen Promontory and Tsungming Island.

Topography.—Great alluvial plain, south comprising portion of Yangtze Delta, 120 by 60 miles. Land low lying, abounding in swamps and lagoons, but noted for fertility.

Agriculture.—Silk, cotton, rice, beans, peanuts, wheat, bamboo, vegetables, and fruits are the main products. Wusih enjoys the reputation of producing the finest silk in the world. Cotton is being produced in larger quantities each year.

Minerals.—The Province is poor in minerals.

Industries.—The greatest development has been in the cotton industry. There are 72 cotton-spinning mills with a total of 2,300,000 spindles and 15,000 looms operating at Shanghai and immediate vicinity. Flour mills, electric light and power plants, oil mills, egg-products plants, match factories, paper mills, electric-lamp factories, chemical works, shipbuilding and engineering works, soap and candle factories, cigarette factories, sawmills, printing and publishing houses, cement plants, spinning mills, breweries, brush factories, sugar refineries, aerated-water factories, tanneries, and canning factories are among the industries that make Shanghai the leading manufacturing center of China. Kiangsu's leading industry is silk. Wusih, Nanking, and Soochow are the principal centers for the manufacture of silk cloth.

Communications.—Waterways: All the rivers are navigable, and the Province is interlaced with canals. Railways: Shanghai-Nanking; Shanghai-Hangchow-Ningpo; Shanghai-Woosung. Country roads are poor and few in number, as water transportation makes them unnecessary. Post offices, 144. Telegraph stations, 69. Cable companies, 3.

Cities.—Shanghai, population of 1,750,000; Soochow, 600,000. More than 100,000; Nanking (capital), Wusih, Chinkiang, Yangchow.

Treaty ports.—Shanghai, Chinkiang, Nanking, Soochow, Woosung.

Language of natives.—Throughout the Province, Soochow or Shanghai dialect and Mandarin; in Shanghai, besides Shanghai dialect, also Ningpo and Cantonese.

American interests.—In eastern section of Province, under Shanghai consulate general; in western half, under Nanking consulate.

PROVINCE OF KWANGSI

Area.—77,000 square miles (about the size of Nebraska).

Latitude.—Corresponds to that of central Mexico.

Population.—12,250,000; 160 per square mile; south and southeast most populous.

Topography and climate.—Mountainous, ranges running southwest to northeast; West River and tributaries have fertile valleys. Climate tropical in south.

Agriculture.—Rice, sugar, fruits, grains, bamboo, cassia, and aniseed are the main products. Kwangsi produces the world's supply of star anise.

Minerals.—Antimony, coal, tin, iron, asbestos, and galena are known to exist, but are not developed.

Industries.—Lack of railways prevent much development. Firecrackers and leather are made at Nanning. Wuchow has a hosiery factory, a silk flature, and a glass factory. Fishing lines made from the intestines of a species of silk worm which feeds on the camphor tree form a specialty peculiar to this Province.

Communications.—Waterways: Steamer traffic on West River; launch service to Lungchow; motor boats ascend Fu tributary to Kweilin. There are no railways. Country roads are poor and in bad condition. Post offices, 279. Telegraph stations, 71.

Cities.—Of more than 75,000 population: Nanning, Wuchow, and Kweilin (capital).

PROVINCE OF KWANGTUNG

Area.—100,000 square miles (roughly, the size of Oregon).

Latitude.—Corresponds to that of south-central Mexico.

Population.—37,200,000; 370 per square mile; densest in West River Delta and along the coast.

Topography and climate.—Mountainous, except in valleys of West River; mountains extend southwest to northeast; valleys and delta regions very fertile, giving three crops a year; well-indented coast line, with good harbors; climate, tropical.

Agriculture.—Silk, rice, sugar cane, tobacco, cassia, fruits, vegetables, bamboo, tea, ginger, reed for matting, and hemp are the main products. Rice is the principal crop, in some places three crops being produced in a year. A very superior hemp is grown. The silk differs from Kiangsu or Chekiang silk in being soft and spongy and producing as many as seven and eight crops a year, compared with two in Chekiang. The oranges, litchis, pomeloes, and ginger of Kwangtung are far-famed.

Minerals.—Iron and coal of good quality are known to abound. Tungsten, manganese, molybdenum, and antimony also contribute to the mineral wealth of Kwangtung, but there is very little development of these mineral resources, owing partly to lack of economic transportation and partly to unfavorable conditions otherwise.

Industries.—Silk filatures, silk weaving mills, rice mills, matting factories, knitting mills, the carving of ivory, the making of lacquer, jade ornaments, embroideries, chinaware, firecrackers, hardwood furniture, medicines and drugs, and the preserving of fruits, ginger, etc., are among the manifold industries of the Cantonese, noted for their progressiveness and industrious habits. Kwangtung is considered the wealthiest Province in China. Under ordinary circumstances it produces \$60,000,000 (silver) in tax revenues.

Communications.—Waterways: Steamer service with all coast ports; splendid launch service in the delta region; water connections with adjacent Provinces; country roads are few, though stone-paved and narrow and connecting market towns beyond reach of waterways. Railways: Canton-Samshui, Canton-Shiuchow, Canton-Kowloon (Hongkong), Kongmoon-Taishan, Swatow-Chaochowfu; under construction, Canton-Hankow. Post offices, 1,178. Telegraph stations, 71.

Cities.—Canton's estimated population is 1,500,000. Between 100,000 and 500,000: Fatshan, Chaochowfu, Hongkong, Sheklung, Shekki, Samshui, Siulam, and Kongmoon. More than 25,000: Swatow, Macao, Hokshan, and Shaping.

Treaty ports.—Canton, Swatow, Kongmoon, Kowloon, Lappa, Pakhoi, Samshui, Hongkong (ceded to Great Britain), Macao (ceded to Portugal), and Kwangchow (leased to France).

Language and characteristics of natives.—Cantonese and tribal dialects are spoken. There are aborigines in the west and Hakkas in the northeast. With the exception of the student class, practically all of the Chinese who emigrated to America were Cantonese.

American interests.—In northern section, under jurisdiction of Swatow consulate; in central and southern section, of Canton consulate general.

PROVINCE OF KWEICHOW

Area.—67,000 square miles (about the size of the State of Missouri).

Latitude.—Corresponds to that of Florida.

Population.—11,000,000; 180 per square mile; densest in south and southeast.

Topography.—Seven-tenths mountainous; a great table-land with mean altitude over 4,000 feet; valleys of Yuan and Wu Rivers deep and narrow.

Agriculture.—Rice, tobacco, bamboo, wood oil, fruits, opium, and wheat are the principal products, though the Province has the reputation of being the most unproductive in China.

Minerals.—Coal, nitrate of potash, iron, zinc, and quicksilver are said to abound, but resources in minerals are unexplored.

Industries.—Mining seems to lend the greatest promise for the industrial future of this Province.

Communications.—Waterways: Yuan and Wu both navigable for very small vessels. Four chief roads, all very narrow, radiate from Kweiyang, connecting with Yunnan, Szechwan, Hunan, and Kwangsi. There are no railways. Post offices, 48. Telegraph stations, 26.

Cities.—Kweiyang (capital), 100,000; Anshunfu, 50,000; Tsunyi, 40,000.

Treaty ports.—None.

Language and characteristics of natives.—Mandarin is spoken among the Chinese, and there are also many tribal dialects. One-third of the people are Chinese and the remainder aborigines.

American interests.—Under the jurisdiction of Changsha consulate.

PROVINCE OF SHANSI

Area.—82,000 square miles (about that of Kansas).

Latitude.—corresponds to that of central California.

Population.—11,000,000; 135 per square mile; densest in fertile depressions.

Topography and climate.—A great loess plateau from 2,000 to 4,000 feet in elevation, with irregular mountain ranges running east and west; several large depressions, formerly lakes, form the fertile and populous sections of the Province. Winters are cold and summers hot; there are rains in spring and summer.

Agriculture.—The loess soil is very fertile. Wheat, millet, sorghum, maize, cotton, tobacco, walnuts, peanuts, rapeseed, and grapes and other fruits, are the principal products.

Minerals.—Shansi is reputed to be the richest Province in China in anthracite coal deposits. The Province is also rich in iron.

Industries.—Agriculture and coal mining form the principal industries. Shansi is noted for its numerous native iron furnaces, but there is very little evidence of the development of modern industry. The Province needs railways and irrigation works.

Communications.—Waterways: The Fen River is navigable for flat-bottomed boats for 40 miles during a short season of the year. Cart roads traverse the fertile plains. These roads have often been worn so far below the surface of the surrounding country that they form veritable canyons. During the past few years 800 miles of graded dirt motor roads have been constructed. Railways: Taiyuanfu, the capital, is connected with the Peking-Hankow Railway by a narrow-gauge line. The Peking-Kalgan line passes through northern Shansi.

Cities.—Between 50,000 and 700,000; Taiyuanfu (capital) and Kweihsing. There are a dozen cities with populations of more than 20,000.

Treaty ports.—None.

Language of natives.—Mandarin.

American interests.—Under jurisdiction of Tientsin consulate general.

PROVINCE OF SHANTUNG

Area.—56,000 square miles (about the size of Illinois).

Latitude.—Corresponds with that of southern California.

Population.—31,000,000; 550 per square mile; one of the most densely populated Provinces; densest in west.

Topography.—Mountainous in eastern and southern sections; western Shantung a great plain. Yellow River, which is not navigable, flows in northeasterly direction through Province, with frequent floods; soil rich. Good harbor at Tsin-tao and one at Chefoo.

Agriculture.—Shantung is a rich agricultural Province; wheat, cotton, millet, sorghum, peanuts, tobacco, maize, silk, fruits, hemp, walnuts, and vegetables are the principal products, in order listed. About 250,000 tons of peanuts are produced mostly for export. A fine quality of tobacco from American seeds is grown.

Minerals.—Coal and iron are the principal minerals. These are worked with modern methods and modern machinery and have developed into important industries.

Industries.—Some of the products that contribute, along with coal and iron, to Shantung's activities are straw braids; vermicelli, from beans, wheat, and sometimes sweet potatoes; pongee silk, from cocoons fed on oak leaves; pig bristles; egg albumen and yolk; cattle; peanut and bean oils; and hair nets. Within recent years, modern flour mills and cotton spinning mills have developed into important industries in Shantung.

Communications.—Waterways: Grand Canal, principal waterway of commerce; Yellow River navigable through Shantung by small native craft only. Railways: Tientsin-Pukow, Kiaochow-Tsinan, with branch to Poshan. Country roads used extensively throughout Province for carts, wheelbarrows, and pack animals, with about 500 miles of roads used for motor transportation. Post offices, 148. Telegraph stations, 76.

Cities.—Tsinan (capital), 300,000. Population of more than 75,000; Chefoo, Tsinang, Tsingtao, Weihaiwei, and Taianfu.

Treaty ports.—Chefoo, Tsingtao, Tsinan (voluntarily opened port), Lungkow, and Weihaiwei.

Language and characteristics of natives.—Northern Mandarin is spoken. The natives are hardy and peaceable, and constitute the bulk of the millions of immigrants into Manchuria.

American interests.—In Shantung promontory, under jurisdiction of Chefoo consulate; in central and southern Shantung, under Tsinan consulate; in Kiaochow, under Tsingtao consulate.

PROVINCE OF SHENSI

Area.—75,200 square miles (about equal to that of Nebraska).

Latitude.—Corresponds to that of Arizona.

Population.—9,450,000; 125 per square mile; densest in Han and Wei River Valleys.

Topography.—High mountain ranges extend across northern and southern ends of Province; north of Wei River country is a great, fertile, low tableland; Wei Basin is called "cradle of China"; Province was once noted for forests, but now hills are denuded of trees.

Agriculture.—The valleys of the Wei and Han Rivers are particularly productive. The Wei Basin produces the finest quality of cotton grown in China. Wheat, corn, tobacco, Irish potatoes, alfalfa, beans, oats, barley, millet, peanuts, silk, persimmons, and rapeseed are also produced, the staple crop being wheat.

Minerals.—Shensi's mineral wealth remains to be exploited. It is supposedly rich in coal and petroleum. Lack of railways and good roads have prevented development.

Industries.—Native flour mills operated by water wheels are numerous. Mules, cattle, and sheep are raised in large numbers.

Communications.—Waterways: The Han River is navigable as far up as Hanchungfu; the Province is poor in navigable waterways. Railways: None; but a projected line crosses Central China through the Wei Basin into Kansu. There is an old road crossing from Shansi over the Wei Basin into central Asia, over which the traffic, by carts and pack animals, is very heavy. A road also passes through this basin from Peking to Chengtu in Szechwan, following also the Han River Valley but crossing over mountain passes 8,000 feet high. Coolies and pack animals by the thousands may be seen on this great highway. Post offices, 57. Telegraph stations, 19.

Cities.—Sianfu (capital), population 200,000.

Treaty ports.—None.

Language of natives.—Mandarin.

American interests.—Under jurisdiction of Hankow consulate general.

PROVINCE OF SZECHWAN

Area.—220,000 square miles (about 80 per cent of the size of Texas.)

Latitude.—Corresponds with that of Texas.

Population.—50,000,000; 230 per square mile; Chengtu plain, 45 by 90 miles, has densest population, estimated at more than 2,000 per square mile.

Topography and climate.—Three-fourths of Province is high plateau with mountains extending to an altitude of 18,000 feet; this plateau, of red sand-

stone, slopes toward east and southeast; Chengtu plain remarkably productive; southern part of Szechwan semitropical.

Agriculture.—Szechwan claims to produce everything raised elsewhere in China. Silk, wheat, sugar, tobacco, fibers, rhubarb, bamboo, tea, herbs, and wood oil figure among the important products. The Chengtu plain is perfectly irrigated by an artificial system 2,000 years old, and is probably the most fertile spot for its size in China.

Minerals.—No proper investigation (or at least none whose results have been made public or otherwise accessible) has been made of the supposedly great mineral wealth of Szechwan, including iron, coal, copper, gold, quicksilver, and petroleum, all of which are reported as being present in quantity. The salt wells bored to a depth of 3,000 feet have disclosed the presence of petroleum and gas in considerable quantity.

Industries.—Szechwan has but one outlet that can be advantageously used—the Yangtze River. As navigation on the dangerous upper Yangtze has up to recent times been confined to junks, the Province has always been self-supporting. During the past few years, however, steam navigation has rapidly developed and it is believed that this will gradually affect the industrial situation. The silk industry is probably the leading industry in Szechwan. Wood oil, salt, brown sugar, vegetable tallow, insect wax, medicines, hides, bristles, tobacco, wool, musk, and paper enter into the industries of the Province. The Szechwan salt wells are famous, some of them being 3,000 feet deep, bored by drills dropped down with bamboo ribbons, and requiring generations to reach this depth.

Communications.—Waterways: Steam navigation has developed rapidly during the past few years, and especially during the last three years, until there are now more than 30 steamers plying above Ichang during the summer and one-third of this number in the winter. There is steam traffic on the Yangtze as far as Suifu, and in the summer as far as Kiatingfu on the Min River. The three main branches of the Yangtze in Szechwan carry a heavy junk traffic, but steamers are rapidly displacing junks on the Yangtze below Chungking. Railways: None, though several have been projected and a concession has been granted to an American concern. There are practically no cart roads. Travel is by foot, on horseback, or by chair. There are no automobiles in the Province. Goods are carried on backs of animals or men. Post offices, 183. Telegraph stations, 49.

Cities.—Chungking, 800,000; Chengtu (capital), 400,000. More than 100,000: Kiatingfu, Fowchow, Wansien, Tzelutsing. Between 25,000 and 100,000: Chungpa, Batang, Ningyuanfu, Fengtuhsien, Kweichowfu, Suifu, and Yachowfu.

Treaty port.—Chungking.

Language and characteristics of natives.—Western Mandarin and tribal dialects. Chinese and aboriginal tribes.

American interests.—Under the jurisdiction of the Chungking consulate.

PROVINCE OF YUNNAN

Area.—146,700 square miles (almost exactly that of Montana).

Latitude.—Corresponds to that of Cuba and southern Florida.

Population.—10,000,000; 70 per square mile; densest on table-land.

Topography and climate.—Mountainous throughout; high and narrow mountain ranges on west; high table-land on east. Yunnanfu, the capital, lies at elevation of 6,200 feet. Climate in higher altitudes good. Along low-lying river beds, usually damp, foggy, and unhealthful. Greatest rainfall in summer months.

Agriculture.—Rice, principal crop. Beans, wheat, and maize extensively cultivated.

Minerals.—Wide variety of minerals, but commercially only tin is important. Production of tin is 10,000 short tons.

Industries.—Agriculture and mining form basis of industries, which are still crude and primitive, cotton weaving being most important.

Communications.—Haifong-Yunnanfu Railway (French) 534 miles. Narrow-gauge railway connects Cochin tin mines with regular line. Regular steamship service between Hongkong and Haifong. Transportation otherwise by pack animals. Post offices, 54. Telegraph stations, 35.

Cities.—Yunnanfu (capital) with population of 170,000, (200 foreigners), is chief commercial center; although not a treaty port, foreign firms are located there.

Treaty ports.—Mengtsz and Hokow in east; Szemao and Tengyueh in south and west respectively.

Language and characteristics of natives.—Western Mandarin is spoken. There are many aboriginal tribes speaking tribal dialects.

American interests.—Under jurisdiction of Yunnanfu consulate.

MANCHURIA (THREE EASTERN PROVINCES: SHENGKING, KIRIN, HEILUNGKIANG)

Area.—365,000 square miles (about the size of California, Oregon, Washington, and Ohio combined).

Latitude.—Corresponds to that of northern United States and southern Canada.

Population.—22,000,000; 60 per square mile; densest in Liao Plain.

Topograph and climate.—Three Provinces, Shengking (Fengtien), Kirin, and Heilungkiang; northern region larger and better wooded, sloping toward Amur River; southern, more fertile, more thickly inhabited, sloping toward Gulf of Liaotung; Sungari Plain in north and Liao Plain in south have fertile soil and splendid crops; large areas still uncultivated; on rich plateau lands, grass sometimes grows 6 feet high. Climate is healthful, though winters are long and very severe.

Agriculture.—Manchuria contains some of the finest agricultural land in the world. Lack of adequate transportation and presence of brigands have caused this virgin country—so sparsely inhabited, so rich in possibilities, and in such close proximity to densely populated areas—to remain all these centuries without having been effectively colonized. The principal crop of Manchuria now is beans, an article whose value has only recently come to be appreciated by the outside world. Wheat ranks second in importance. Other cereals, such as millet, sorghum, and maize, are raised in large quantities. Silk (from worms fed on oak leaves), indigo, vegetable oils, fruits, and livestock add to Manchuria's agricultural wealth.

Minerals.—Practically the whole of South Manchuria is one vast coal field. Iron and gold are also found. Japanese capital is developing the coal and iron properties in a large way. Gold, silver, copper, iron, and soda are found in North Manchuria. Of these only gold, coal, and soda are produced, gold chiefly in the northern part of Heilungkiang, on the tributaries of the Amur River, and coal at Manchuria Station, Chailinor, Machiaohe (near Suifenho), and at other places. The Chinese Eastern Railway and Russian and Chinese private capital are interested in developing coal mines.

Industries.—Manufacturing of bean products, flour milling, lumbering, and cattle raising constitute great industries in Manchuria. Raw silk, tobacco, furs and skins, and iron and coal are becoming the bases of profitable industries, employing in some cases enormous capital. The South Manchuria Railway, with its ramifications of industry, including coal, iron, and steel industries, is the biggest institution in South Manchuria. The Chinese Eastern Railway is the largest enterprise in North Manchuria. These railways have directly and indirectly developed industries, populated the country, and brought prosperity to the settlers.

Communications.—Waterways: The Amur River is navigable for the largest river steamers from Nikolaevsk, near its mouth, to Blagoveshchensk; and smaller steamers go on to Stretyinsk, more than 1,500 miles from its mouth. Owing to a series of sand bars across the mouth of the river, large ocean steamers are not able to go up to Nikolaevsk, but the dredging operations that have been undertaken will, when completed, enable ocean vessels to go up the river at least as far as Khabarovsk.

The Sungari is navigable to Kirin, the Nonni to Tsitsihar, the Liao to Tungkiantze, and the Yalu for its entire course. Railways: Mukden is connected on the south with Tientsin and Peking, on the north with Harbin and Tsitsihar, on the southeast with Port Arthur and Dairen, and on the east with Antung; through rail service from Peking to Yokohama, via Manchuria and Korea, is established, and also in peace times from Peking to Petrograd via Manchuria. Through the Chinese Eastern Railway, Harbin is connected on the south with Changchun (which is the northern terminus of the South Manchuria Railway, leading to Mukden and Dairen), on the west with Manchouli, the terminus of the Chita Railway, which connects with the Trans-Siberian trunk line leading to Europe, and, on the east, with Nikolsk, the terminus of the Ussuri Railway, which leads to Vladivostok and the Pacific Ocean. The express trains of the Chinese Eastern Railway are ranked among the best

in the world. Motor traffic is being rapidly developed in Harbin and other places in North Manchuria; in the winter a motor car can travel anywhere across the country. Post offices, 203. Telegraph stations, 132.

Cities.—Harbin, 100,000 foreigners, mostly Russians (larger white population than any other city in Asia), and 200,000 Chinese; Dairen, 186,000; Mukden, 200,000 Chinese; Kirin, 100,000. Changchun, Aigun, and Newchwang are other important cities.

Treaty ports.—Aigun, Antung, Dairen (Japanese leased territory), Manchouli, Newchwang, Sausung, Suifenho, Harbin, Mukden, Fakumen, Fenghwangcheng, Hsionmintun, Tieling, Tungkiangtze, Yingkow, Liaoyang, Changchun, Kirin, Ninguta, Chientao, Tsitsihar, Hallar.

Language of natives.—Northern Mandarin is most common. Russian, however, is the commercial language of North Manchuria, although both Chinese and Japanese are employed in dealing with the many important firms of those two nationalities.

American interests.—In North Manchuria, under jurisdiction of Harbin consulate; in southeast, of Antung consulate; in Dairen and leased territory, of Dairen consulate; in South Manchuria, of Mukden consulate general.

CHINESE DEPENDENCIES

MONGOLIA

Area.—1,370,000 square miles (about one and one-half times the area of that portion of the United States lying east of the Mississippi).

Latitude.—Corresponds with Northern United States and Southern Canada.

Population.—2,500,000; 2 per square mile; densest in east and in river valleys.

Topography and climate.—A vast basin-like plateau of 3,000 to 4,000 feet elevation, surrounded by mountain ranges and undulating steppes; near center is Gobi Desert, of more than 260,000 square miles; frequent sandstorms; atmosphere dry, winters extremely cold. For purposes of administration country is divided into two sections—northern or Outer Mongolia, and southern or Inner Mongolia.

Agriculture.—The country is pastoral and the people nomadic. Cattle raising and sheep raising are carried on, with agriculture in certain favored regions. The average annual rainfall is between 8 and 10 inches a year. The principal crops are grass, wheat, and millet.

Minerals.—Gold has been mined for years. The mineral wealth is subject to investigation, but the region is reputed to be rich in coal, iron, copper, gold, silver, lead, and zinc.

Industries.—Cattle and sheep raising, hides, wool (sheep and camel), licorice, and drugs seem to constitute the leading items of production.

Communications.—Waterways: Canals and rivers are little used, as they are off the trade routes. Railways: None; one projected to connect Urga, the capital, with the Peking-Kalgan line. Ten or twelve foreign and Chinese companies are engaged in motor-car transportation service between Kalgan and Urga, making the trip in four days and using, in the main, American cars. Roads are poor and not well marked. Main highway leads from Kalgan to Kiakhta via Urga. Caravan routes lead to Siberia, with camel and bullock wagon trains.

Cities.—Urga (capital), 38,000; the only important city.

Treaty ports.—Urga and Kiakhta, but present status difficult of determination, owing to dominance of Soviet Russia's political interests.

Language and characteristics of natives.—Mongolian is spoken. The people of the west are Turkish, those of the south are Chinese, while the Mongols inhabit Mongolia proper.

American interests.—Under jurisdiction of Kalgan consulate.

SINKIANG (INCLUDING NEW PROVINCE AND CHINESE TURKESTAN)

Area.—550,000 square miles.

Population.—2,500,000; 4 per square mile; densest in eastern section.

Topography.—For the most part Chinese Turkestan is an immense desert, surrounded by mountains of great height. Fertile spots occur only here and there.

Agriculture.—Where irrigation is possible, splendid crops are produced. The famous oasis of Hami is exceptionally fertile, producing barley, oats,

millet, and wheat. Its melons are famous throughout China, for in former years many were sent to the Peking court.

Minerals.—Chinese Turkestan produces a fine quality of jade. Its mineral resources are as yet unknown.

Industries.—Horses, camels, donkeys, sheep, and goats are raised. Carpets, jade, furs, skins, and silk fabrics are among the articles produced.

Communications.—Several ancient roads, of great historical interest but in bad condition, are used as trade routes.

Cities.—Kashgar, 60,000; Yarkand, 50,000; Khotan, 30,000; Turfan, 20,000; Urumtsi, 30,000.

American interests.—Under the jurisdiction of Hankow consulate general.

TIBET

Area.—465,000 square miles.

Population.—6,000,000; 12 per square mile.

Topography.—The greater part of Tibet is desert, but valleys in the south and west are fertile and vegetation is luxuriant. The valley of the Chumbi River is reported to be the most fertile portion. The country as a whole has the greatest average elevation of any similar area in the world. On account of its marginal mountain ranges it is almost inaccessible.

Agriculture.—In the fertile valleys are grown fruits and vegetables, as well as corn and barley. Tibet furnishes excellent pasture lands. The domestic animals—the tame yaks, asses, goats, sheep, and horses—are sources of wealth to the natives.

Minerals.—Little is known of the mineral wealth, though all writers speak of gold abounding in free form. There is a superstition against mining, therefore it is discouraged. Tibet is, however, regarded as rich in minerals.

Industries.—Yak hides, lambskins, musk, gold dust, wool, saddle rugs, carpets, and medicines are some of the products exchanged for Chinese wares and products. The Tibetans generally lack enterprise, though they are highly spoken of in various other respects.

Communications.—Roads are few and bad. Rope bridges are used in crossing rivers and torrents. Sometimes the yak skin is used in making a sort of light ferryboat. Government couriers, traveling day and night, with relays of horses, have been known to reach Peking from Lassa within a month.

Cities.—Towns are all small, generally with a maximum of a few hundred inhabitants. Lhasa, the capital, has 40,000, more than half of whom are priests. This number is augmented considerably from time to time by pilgrims.

Treaty port.—Yatung, a small town with only a few score inhabitants.

Language and characteristics of natives.—The language of the natives is polysyllabic and highly developed. They are credited with being among the more highly endowed peoples of the world. They are fond of music and dancing and are complimented by travelers for their kindly bearing, cheerfulness, and frankness.

American interests.—Under the jurisdiction of the Chungking consulate.

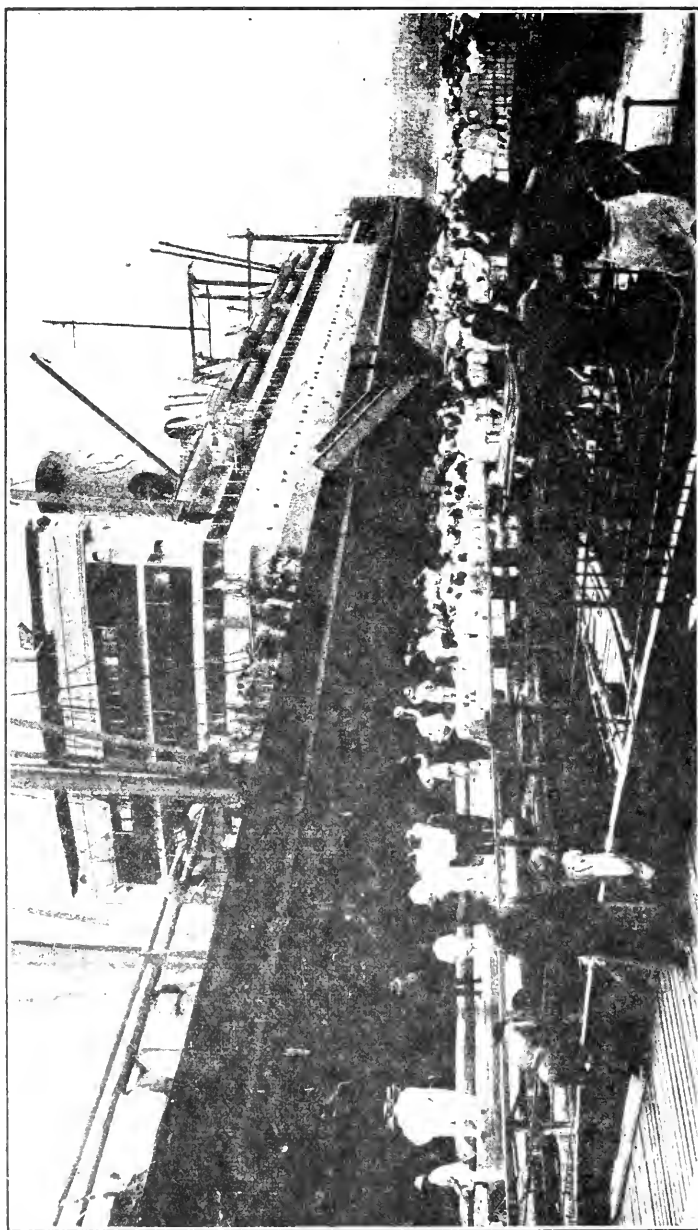


FIG. 1.—Steamship *President Jefferson* leaving Shanghai. Among passengers are upwards of 100 students bound for colleges in United States

SKETCH OF CHINESE HISTORY

Dr. F. L. Hawks Pott, President, St. John's University, Shanghai

Connected with the story of China there are three remarkable features. Firstly, antiquity, for whereas many ancient nations mentioned by Herodotus as its contemporaries have passed away, China still exists; secondly, the development of a unique civilization, reaching its climax some 3,000 years ago; and thirdly, isolation, owing to the fact that for a long stretch of time there was little intercommunication or cross-fertilization with other peoples.

EARLIEST PERIOD

The origin of the Chinese race remains one of the unsolved problems of history, and all that we can say with certainty is that it came from somewhere in western Asia. Ethnologically the Chinese differ from other races of western Asia, as is seen by the structure of the hair and the formation of the eyes. In the south there has probably been considerable admixture of Malaysian blood.

Originally a nomadic people, the Chinese found their way through the pass between the Tien Shan and Altai Mountains, and settled near the banks of the Yellow River in what is now the Province of Shensi.

Here they rapidly developed into an agricultural people, and, as in the case of the Euphrates and Nile, we find the growth of a civilization connected with a great river valley.

It goes without saying that the Chinese were not the first inhabitants of the country in which they settled. They were brought into conflict with aboriginal tribes, much as the European settlers in North America were with the Indians. Remnants of these ancient tribes, called the Lolos, the Shans, and the Miaotse, are found in the islands of Formosa and Hainan and in Kweichow, Szechwan, Yunnan, Kwangtung, and Kwangsi Provinces, in South and West China.

The geographical situation of China helps to account for its long-time isolation from the rest of the world. On the west, the northeast, and the southwest there are great mountain ranges, and on the east the waters of the Pacific. The chief access in ancient times was over a long stretch of desert by the caravan route, which entered from the northwest through the pass we have referred to between the Tien Shan and Altai Mountains. In this way there was some commercial relation with central and western Asia and with the Mediterranean world, but China was not brought into close commercial relationship with the European world until the sea route around the Cape of Good Hope was discovered at the close of the fifteenth century.

In a brief sketch like this, there is no space to refer to the mythical and legendary period. Chinese historians begin their story with the Age of the Five Rulers, B. C. 2852. One historic event stands out, and that was the great flood, B. C. 2297, caused probably by the overflow of the Yellow River. We have a graphic account of the disaster and the way the celebrated Yü, styled the "Engineer

Emperor," coped with the calamity, and it is interesting owing to the fact that there have been periodical disasters of the same character, the consequences of which have led foreigners to refer to this river as "China's Sorrow."

During this period there was a more or less continuous struggle with the aborigines, known as the outlying barbarians, and they were pushed southward and westward.

At first the part of China controlled by the Chinese was small and comprised the modern Provinces of Shensi, Shansi, and Chihli. The government was patriarchal and the rules were great tribal chieftains. Society was organized on the clan system, which accounts for the paucity of recognized surnames in China.

The clan spirit endures in China. In various parts of the country, and in the south especially, we still find clan fights. To understand modern China one has to bear in mind the strength of clan spirit. The family is the social unit, but each family is a member of a larger aggregation—the clan.

The early religion of the Chinese may be summarized as follows: There was the worship of Shang-ti (the supreme ruler), the powers of nature, and the ancestors. Divination was practiced. There were two classes of spirits, the beneficent and the evil, a distinction indicated by the Shen and the Kwei.

CHOW DYNASTY

The first historic dynasty in Chinese history was the Chow. It was established B. C. 1122 and lasted for nine centuries. We are indebted for our account of it to the writings of Confucius. It may be called the feudal period of Chinese history. Owing to the struggle with the aboriginal tribes, military chieftains became powerful, and just as at a later period in European history, so in the East the successful warriors were rewarded by grants of land or by being given the control over small principalities. In this way a military aristocracy was developed and there was a division into orders, corresponding to dukes, marquises, counts, earls, and barons. China became a loose confederation of States ruled by these feudal chieftains, who paid uncertain allegiance to the Emperor as their suzerain. Its political condition was not unlike that of the German confederation in the eighteenth century.

During this period lived the trio of famous teachers, Confucius, Mencius, and Lao-tze. Confucius, the greatest of Chinese sages, was born B. C. 551. Shortly after his death he came to be regarded with a feeling of religious veneration, and for over 2,000 years his teachings have exerted great moral and intellectual influence on his countrymen. Inasmuch as his purpose was to preserve the beliefs and customs of antiquity, his teachings have fostered conservatism. This is especially the case in regard to the emphasis placed on ancestor worship. His influence in China may be compared to the influence of Aristotle in Europe during the Middle Ages. Anything contrary to his doctrine was regarded as heretical.

TSIN DYNASTY

At the close of the Chow dynasty we come to a period of greater centralization. This was brought about by the founder of the Tsin dynasty, the Emperor Shih Huang-ti (B. C. 221–200).

The evils of the feudal system had become so apparent that the Emperor took steps to increase the power of the central government by abolishing the small principalities or kingdoms and dividing the country into 36 Provinces, the rulers of which were to be directly responsible to himself.

Two well-known events took place during his reign. The first was the attempted destruction of the ancient literature, so that the conservative influence which it exercised over the minds of the people might be weakened. The second was the completion of the Great Wall along the northern frontier to prevent the inroads of the northern barbarians. It extends for 1,500 miles across mountains, hills, valleys, and plains, and is one of the most remarkable structures built by human toil.

HAN DYNASTY

During the Han dynasty (B. C. 206—A. D. 251), which followed the Tsin, the imperial form of government was further developed, and the boundaries of the Empire were extended.

As to social organization the people were divided into the following classes: (1) The literati, whose education consisted in the acquirement of the six accomplishments—archery, horsemanship, rites, music, history, and mathematics; (2) the cultivators of the land; (3) the artisans; (4) the merchants.

No caste system has ever been developed in China, but there has been an intellectual aristocracy, a high prestige being enjoyed by the literati or educated class. Owing to the difficulty in acquiring a knowledge of the written character, education could not be widely extended and was confined to a privileged class. We have already referred to the influence of Confucius as making for conservatism. The other great conservative influence was that of Chinese education. It produced a class limited in numbers, bent on the preservation of classicism, and the turning away from the study of nature. Hence the backwardness in the development of science.

The farmers occupy the second place of honor. This points to the fact that China is essentially an agricultural country. Probably 300,000,000 out of the 400,000,000 inhabitants at the present day are engaged in tilling the soil. The land has become divided into small holdings, and peasant ownership has remained one of the marked economic features. This helps us to understand the difficulty in the introduction of farming machinery into this country, and of making any radical change in the methods of cultivation.

It may seem strange that the mercantile class is the last on the list. This is probably due to the fact that the merchants were regarded as the distributors and not as the creators of wealth. Commerce for the most part was conducted on a small scale. At an early period it was organized into guilds, regulating prices and terms of apprenticeship. Joint-stock companies were unknown until recent years, and the failure of many such enterprises may be partly accounted for by lack of experience.

THE THREE KINGDOMS

At the close of the Han dynasty there was one of the constantly recurring periods of civil war (owing to the fact that China has never developed a strongly centralized government), and the coun-

try was divided for a time into the Three Kingdoms—Wu (in the east), Shu (in the west), and Wei (in the north).

The weakness caused by internal dissension gave the northern nomad tribes outside the Great Wall the opportunity for which they were seeking, and henceforth they became a constant menace to China. These nomad tribes came first from Mongolia and later from Manchuria.

The first tribe to make an attack on China was that known as the Hiung-nu from Mongolia. From them descended the Huns, who later drove the Germanic tribes toward the west, and under the leadership of Attila (A. D. 445) attacked the Roman Empire.

TANG DYNASTY

In the Tang dynasty (A. D. 618–907) the Empire was once more united. When peace had been established, the country entered on a period of great prosperity.

The civil examination system took on the form which lasted until the overthrow of the Manchus, and officialdom was recruited from the successful candidates. Remains of the ancient examination halls may still be seen by travelers in the city of Nanking. The Hanlin Academy, consisting of the greatest scholars of the land, was established in Peking.

The use of gunpowder, the compass, and printing from carved blocks date back to this period. The Empire was still further enlarged and the extent of China proper became approximately what it is at the present day.

During the reign of the great Emperor Tai-tsung (A. D. 627–650) Christian missionaries of the Nestorian Church came to China. They were permitted to propagate their religion, and at first met with considerable success. The Nestorian Tablet near Sianfu, Shensi, stands as a permanent memorial to this first Christian missionary enterprise.

At the close of the Tang dynasty, A. D. 907, came another period of internal disorder, with the inevitable consequence that the nomad tribes from the north made fresh incursions into the country.

SUNG DYNASTY

Thus we find the Sung dynasty (A. D. 906–1280) dividing the country with the tribe known as the “Golden Horde” or the Kins. The Kins occupied the north, and the Sung Emperors ruled over the south. Incessant warfare was carried on, and the famous Chinese general, Yoh-fei, whose tomb may be seen at Hangehow, struggled to drive out the Kins.

During the Sung dynasty, there lived a well-known social reformer, Wang An-shih (1068). He made radical proposals on the lines of state socialism in regard to the nationalization of commerce, government loans to farmers, income tax, and compulsory enrollment of militia. The unpopularity and failure of his plan are an evidence of the deep-rooted conservatism of China at that time.

MONGOL DYNASTY

After the Kins, another Tartar tribe, the Mongols, obtained the ascendancy. Under their great leader Genghis Khan (A. D. 1162)

they invaded the north of China. It is said that the great Khan himself marched in triumph to the Shantung Peninsula, and from the hills near the modern Weihaiwei looked out over the sea.

The Mongols invaded western Asia and, penetrating as far as eastern Europe, overran Russia.

The conquest of China was made by Kublai Khan, the grandson of Genghis Khan. The Sung dynasty was overthrown, and a new dynasty established known as the Yuan or Mongol dynasty (A. D. 1280-1368).

Owing to the invasion of Russia, Hungary, and Poland by the Mongols, the people of Europe had their attention directed to eastern Asia, and travelers and merchants undertook journeys to these unknown regions. The Christian Church realized that there was a vast territory for missionary enterprise. Among the earliest visitors of whom we have authentic records were the Polos, especially Marco Polo (1274).

In company with his father and uncle he came to China when he was 16 years of age. The travelers carried letters from Pope Gregory X, who was desirous of propagating Christianity in the Empire. Marco Polo gained favor at the Mongol court and was permitted to travel freely. Altogether he spent 21 years in the country, and at one time was prefect at Yangchow. In some of the Buddhist temples in the large cities in China, among the images of the 500 Lohans, that of Marco Polo is pointed out to travelers.

After his return to Europe, about 1300 A. D., he dictated an account of his travels in the East, and gave to Europe a description of what up to that time had been comparatively an unknown land.

During this dynasty the reconstruction of the Grand Canal, extending for a thousand miles between Hangchow, near Shanghai, and Tungchow, 14 miles east of Peking, was carried out.

The Mongols added little to the civilization of China, but yielded to the superior civilization of those whom they had conquered, for, as has been well said, China is like a sea that makes all the water that runs into it salt.

MING DYNASTY

After less than a century, the Mongol dynasty disappeared in a welter of disorder, and China again came under the rule of a native dynasty. This was the Ming (A. D. 1368-1644).

As was natural, an earnest attempt was made to restore everything that belonged to the old régime. The civil-service examinations were reorganized and the Government of China assumed the form it held up to the time of the revolution.

The Emperor ruled by divine right, and was regarded as the Son of Heaven. He had the appointment of the Six Boards of Administration, and of the viceroys and governors of the Provinces. A Province may be compared to a territory in the United States Government. All officials in the Provinces down to the district magistrate were appointed by the central Government, but no one was allowed to hold an official position in his native Province. The Provinces were like satrapies and were free to administer their local affairs in detail, provided that they paid the necessary tribute and followed the general policy of the central administration. They

had local autonomy for the levy of taxes and the administration of the law.

In the village communities, however, the village elder or "Tipao" was appointed "with and by the advice and consent" of the villagers, represented them in all official and governmental affairs, and was the channel of communication between the officials and the villagers.

From this brief account it will be seen that the Government of China has always been loosely federated. If we bear this in mind we can understand the frequent breaking away of Provinces from the central Government and the declaration of their independence. The centrifugal force has always tended to become stronger than the centripetal.

As peace prevailed for a long time, the population of the 18 Provinces into which the country was divided increased rapidly.

During the Ming dynasty, A. D. 1368-1644, adventurers and merchants from Europe began to come by the new sea route recently discovered, and not, as formerly, by the overland routes.

The first to make their appearance were the Portuguese. In 1577 they obtained a lease of Macao, 88 miles from Canton, and there made a settlement which has continued to the present day.

In 1573 the Spaniards came upon the scene and took possession of the Philippine Islands, which they retained until the Spanish-American War.

In 1622 the Dutch arrived, settling first on the Pescadores Islands, and then erecting trading forts at the north and south ends of the island of Formosa, where they remained until 1659.

MANCHU DYNASTY

The Ming dynasty lasted for nearly 300 years, and then, owing to a rebellion in China caused by internal dissension, fell before the inroads of the Manchus, who captured Peking and established the Tsing dynasty. The wearing of the queue imposed by the conquerors as a badge of submission to the Manchus dates from that time.

MODERN PERIOD

This brings us to the modern period—most difficult to condense in a brief sketch. One of the chief features is the conflict between China and western nations, which resulted in opening up China to foreign commerce and to modern industrial methods. The industrial revolution in Europe led to the search for new markets for machinemade goods, and thus an economic factor had a good deal to do with forcing China to enter into closer commercial relations. China's attitude was one of reluctance. China prided itself upon what it considered its superior civilization, and did not welcome foreign trade. In fact it considered that by the purchase of foreign commodities money would flow out of the country, leading to its impoverishment.

Russia and Holland in succession sent commercial missions to China, but were unsuccessful in removing the barrier of restriction on foreign trade.

In the reign of Kien-lung (1793) while George III was King of England, Lord Macartney was sent on a commercial mission to

Peking, and consent was obtained for carrying on trade at Canton by British merchants, provided that they submitted to the regulations imposed by the provincial officials. As a result there was constant friction, leading finally to war.

The first war between China and Great Britain, known as the "Opium War," occurred in 1841-42. The war was disastrous for China and was brought to a close by the signing of the treaty of Nanking (1842). According to the terms of this treaty, Canton, Amoy, Foochow, Ningpo, and Shanghai were opened as treaty ports, where foreigners could reside and carry on trade, and Hongkong was ceded to Great Britain.

The first treaty between the United States and China was signed by Caleb Cushing on July 3, 1844, although the first American vessel visited China as early as 1783 with a supercargo, Major Shaw, commissioned by the Continental Congress as consul to Canton.

A second war occurred in 1856-1860, in which France joined with Great Britain in order to compel China to yield to the demand of the western nations for larger commercial privileges and the opening up of diplomatic relations. The result was the treaty of Peking (1860), by which Kowloon, opposite Hongkong, was ceded to Great Britain, and Tientsin was opened as a treaty port. The right of the residence of foreign ambassadors was granted. Other nations secured the same commercial privileges and entered into treaties with China.

In the meantime China was ravaged by the Taiping rebellion (1850-1864), in which over 20,000,000 lives were lost and many of the fairest districts of the Empire were devastated.

China yielded to the demands of the foreign nations from compulsion, and her submission incited a strong feeling of hostility among the people.

The antiforeign spirit manifested itself in the Tientsin massacre of 1870, when the Roman Catholic orphanage and cathedral were destroyed, and in the assassination of Mr. A. R. Margary, of the British consular service, on the borders of Yunnan in 1876.

As a result of the latter act of violence a convention was held at Chefoo, and China was forced to agree to the opening of four new treaty ports—Ichang, Wuhu, Wenchow, and Pakhoi—and six ports of call on the Yangtze for the landing of foreign goods.

In 1884 a war broke out with France over a dispute in regard to Tonkin, in which China was further humiliated.

As an evidence of the strong antiforeign feeling among the people, riots broke out along the Yangtze River in 1891. It did not yet occur to China that internal reform and the adoption of a progressive policy were the only means by which the country might be saved from foreign aggression.

The war with Japan (1894-95) was a turning point. China learned its own weakness and the strength that Japan had acquired by adopting western education and military science.

As a consequence of this war China was obliged to recognize the independence of Korea (since then annexed by Japan), to give up Formosa and the Pescadores Islands, and to open as treaty ports Shasi, Chungking, Soochow, and Hangchow.

The effects of this war did not end here. Realizing China's weakness, a policy of further aggression was pursued by western

nations. In 1897 Germany seized Kiaochow. Russia forced the Chinese Government to lease Port Arthur (a very strong naval base), Great Britain obtained the lease of Weihaiwei and France that of Kwangchow. Italy put in a demand (not granted) for Saumen Bay in Chekiang in 1898. It began to look as if the partition of China were inevitable.

Alarmed by the dangers to which the country was exposed, a band of ardent reformers persuaded the Emperor Kwangshu to adopt a more enlightened policy. In 1898 the famous reform edicts were issued, and for a brief period it seemed as if China was about to modernize its government. But the Empress Dowager by a coup d'état seized the government, put the reformers to flight, instituted a reign of terror, and restored the conservative régime.

The Boxer outbreak in 1900 was the last desperate attempt on the part of the ultraconservative element to stem the tide of European encroachment. The complete failure of this uprising and the success of Japan a few years later in the Russo-Japanese War were convincing evidence that China's only hope of salvation was in following the example of Japan, especially in regard to education and military science.

Even the Empress Dowager appeared to be converted, and in 1905 the old civil-service examination system, instituted in A. D. 630, was abolished, and the new education was introduced into the schools. Promises were made in regard to the granting of a constitution, and the country was exhorted to prepare itself for this important change.

Owing to growing discontent with the corruption of the Manchu Government and its insincerity in regard to redeeming its promise of a grant of a constitution, a revolution broke out in Wuchang in 1911, resulting in the expulsion of the Manchus and the establishment of the Republic. Dr. Sun Yat-sen, who for a long time had been raising funds in foreign countries for fomenting a revolution, returned to China and was proclaimed provisional President in Nanking on January 1, 1912. In order to bring over the north to the side of the Republic, Dr. Sun Yat-sen retired in favor of Yuan Shih-kai, who was elected President by the National Assembly.

The revolutionists were soon dissatisfied with Yuan, and an attempt at a second revolution took place in 1913. This was suppressed and President Yuan undertook to govern the country as a military dictator, appointing his generals as military governors or tuchuns over the Provinces. In 1916 he attempted to restore the Empire and to make himself Emperor, but owing to a threatened rebellion he was forced to relinquish his ambitious design. Upon his death, which occurred shortly afterwards, the country drifted into a helpless condition politically, owing to the struggle among the military governors for supremacy.

During the Great War Japan ranged itself on the side of the allied nations, and participated by sending an expedition for the capture of Tsingtao, the port of Kiaochow, from the Germans. After its fall Japan seized the opportunity of making 21 demands upon China, in an endeavor to obtain a measure of political and economic control over China's development. China was compelled to yield, but declined assent to Group V, which contained the most objectionable demands.

In 1917 China broke off diplomatic relations with Germany, and the question as to whether it should declare war or not aroused a great controversy. Parliament was opposed and in consequence was dissolved. After the dissolution of Parliament those in favor of war, the military party, dominated the Government and war was declared.

One consequence of the dissolution of Parliament was the revolt of Dr. Sun Yat-sen, who came forward as the champion of the Constitutionalists and set up an independent government in Canton.

By declaring war against Germany, China hoped to avail itself of the friendship of the Allies and to obtain redress of its grievances, in the terms of peace at the close of the war. At the Versailles Conference, however, China met with a disappointment. Unable to obtain the possession of the territory it had been compelled to relinquish—as China believed, unjustly—a strong anti-Japanese feeling broke out in the country, and China's representatives refused to sign the terms of the Versailles treaty.

At the present time, politically, China is in a difficult situation. The finances of the central Government are in a distressed condition. The struggle for power continues between the rival tuchuns in the north. The country is rent with civil dissension, and, in consequence, commerce, industry, and education are making little progress.

The three great needs of China are (1) a stable government, (2) improved economic conditions, and (3) the spread of education. But, amidst so much that is dark, there are hopeful features. There is a rapid growth of national consciousness; there is a strong desire for peace; and there is a general discontent with the militaristic régime. The merchants of China are beginning to assert themselves and to demand a government that will put an end to disorder so that commerce and industry may be further developed. There is also in process a great intellectual revolution and a rapid dissemination of new ideas. All these forces must in time produce far-reaching results and bring about a new era in China.

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RÉSUMÉ OF THE TRADE OF CHINA

By Commercial Attaché Julean Arnold

Although the Portuguese as early as 1516 inaugurated direct trade with China, followed by Spanish, Dutch, and British traders, and although American clipper ships were predominant in South China waters during the early decades of the nineteenth century, yet it was not until the middle of the nineteenth century that China was actually opened to the trade of the Western world. The self-sufficing nature of Chinese society is demonstrated by the difficulties foreign traders experienced in introducing their products into China. Up to the latter half of the nineteenth century, the profits in trade with China, with the exception of the trade in opium, were derived from the sales of China's products in Western markets rather than from exports to China.

Roughly speaking, the year 1890 marks the beginning of modern China, for it was not until then that the Chinese people gave substantial evidence of a receptive attitude toward the ideas and commodities of the West.

VALUE OF TOTAL TRADE

Considering the belated nature of China's industrial awakening, the inertia of an old and long-established civilization, and the political disturbances attendant upon the transition from the old to the new order, the growth of trade and industry along modern lines during the past 30 years in China is most remarkable. The following graph and table showing China's foreign trade from 1864 to 1924 indicate clearly the vastly greater strides made during the last 30 years as compared with the first half of this period.

Year	Net imports ¹	Exports	Total trade	Exchange rates for haikwan tael in U. S. gold and sterling	
	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>		<i>s. d.</i>
1864.....	51,293,578	54,006,509	105,300,087	-----	6 8
1865 ²	61,844,158	60,054,634	121,898,792	-----	6 8
1866.....	74,563,674	56,161,807	130,725,481	-----	6 3
1867.....	69,329,741	57,895,713	127,226,454	-----	6 3
1868.....	71,121,213	69,114,733	140,235,946	-----	6 5
1869 ³	74,923,201	67,143,988	142,067,189	-----	6 7½
1870.....	69,290,722	61,682,121	130,972,843	-----	6 6½
1871.....	70,103,077	66,853,161	136,956,238	-----	6 6½
1872.....	67,317,049	75,288,125	142,605,174	-----	6 7¾
1873.....	66,637,209	69,451,277	136,088,486	-----	6 5½
1874.....	64,360,864	66,712,868	131,073,732	-----	6 4½
1875.....	67,803,247	68,912,929	136,716,176	-----	6 2½
1876.....	70,269,574	80,850,512	151,120,086	-----	5 11½
1877.....	73,253,896	67,443,022	140,678,918	-----	6 0½
1878.....	70,804,027	67,172,179	137,976,206	-----	5 11½

¹ Net imports, i. e., the value of the foreign goods imported direct from foreign countries, less the value of the foreign goods reexported to foreign countries during the year.

² Taiping Rebellion raged from 1852 to 1865.

³ Suez Canal opened, shortening the route to China.

Year	Net imports	Exports	Total trade	Exchange rates for haikwan tael in U. S. gold and sterling	
	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>		<i>s. d.</i>
1879	82,227,424	72,281,262	154,508,686	.....	5 7½
1880	79,293,452	77,883,587	157,177,039	.....	5 9½
1881	91,910,877	71,452,974	163,363,851	.....	5 6½
1882	77,715,228	67,336,846	145,052,074	.....	5 8½
1883	73,567,702	70,197,693	143,765,395	.....	5 7½
1884	72,760,758	67,147,680	139,908,438	.....	5 7¼
1885	88,200,018	65,005,711	153,205,729	.....	5 3½
1886	87,479,323	77,206,568	164,685,891	.....	5 0½
1887	102,263,669	85,860,208	188,123,877	\$1. 20	4 10¼
1888	124,782,893	92,401,067	217,183,960	.....	4 8¾
1889	110,884,355	96,947,832	207,832,187	.....	4 8¼
1890	127,093,481	87,144,480	214,237,961	.....	5 2½
1891	134,003,863	100,947,849	234,951,712	.....	4 11
1892	135,101,198	102,583,525	237,684,723	1. 07	4 4½
1893	151,362,819	116,632,311	267,995,130	.....	3 11¼
1894 ¹	162,102,911	128,104,522	290,207,433	.....	3 2½
1895 ²	171,696,715	143,293,211	314,989,926	.....	3 3¼
1896	202,589,994	131,081,421	333,671,415	.....	3 4
1897	202,828,625	163,501,358	366,320,983	. 72	2 11¾
1898	209,579,334	159,037,149	368,616,483	.....	2 10½
1899 ³	264,748,456	195,784,832	460,533,288	.....	3 0½
1900 ⁴	211,070,422	158,996,752	370,067,174	.....	3 1¼
1901	268,302,918	169,656,757	437,959,675	.....	2 11½
1902	315,363,905	214,181,584	529,545,489	. 63	2 7½
1903	326,739,133	214,352,467	541,091,600	. 64	2 7½
1904 ⁵	344,060,608	239,486,683	583,547,291	.....	2 10½
1905	447,100,791	227,888,107	674,988,898	.....	3 0¼
1906	410,270,082	236,456,739	646,726,821	.....	3 3½
1907	416,401,369	264,380,697	680,782,066	. 79	3 2
1908	394,505,478	276,660,403	671,165,881	.....	2 3
1909	418,158,067	338,992,814	757,150,881	.....	2 7½
1910	462,964,894	380,833,328	843,798,222	. 66	2 8½
1911 ⁶	471,503,943	377,338,166	848,842,109	. 65	2 8¼
1912	473,097,031	370,520,403	843,617,434	. 74	3 0½
1913 ¹⁰	570,162,557	403,305,546	973,468,103	. 73	3 0¼
1914 ¹¹	569,241,382	356,226,629	925,468,011	. 67	2 8¾
1915	454,475,719	418,861,164	873,336,883	. 62	2 7½
1916 ¹²	516,406,995	481,797,366	998,204,361	. 79	3 3½
1917	549,518,774	462,931,630	1,012,450,404	1. 03	4 3½
1918	554,893,082	485,883,031	1,040,776,113	1. 26	5 3½
1919	646,997,681	630,809,411	1,277,807,092	1. 39	6 4
1920	762,210,230	541,631,300	1,303,841,530	1. 24	6 9¼
1921	906,122,439	601,255,531	1,507,377,976	. 76	3 11¾
1922	945,049,650	654,891,933	1,599,941,583	. 83	3 9
1923	923,402,881	752,917,416	1,676,320,303	. 80	3 5¾
1924	1,018,210,677	771,784,468	1,789,995,145	. 81	3 7½

¹ Sino-Japanese War, 1894-95.

² 1895-1899 period of foreign aggression—territorial "leases," "spheres of influence," "scramble" for railway and mining concessions, and the beginning of China's foreign indebtedness.

³ Influence of railways felt.

⁴ Boxer outbreak.

⁵ Russo-Japanese War, 1904-5.

⁶ Revolution in October.

¹⁰ Rebellion in summer.

¹¹ European War from August.

¹² Internal disorders, 1916-17.

China's imports for the year 1880, valued at 79,300,000 haikwan taels (the average value of the tael for 1880 was 5 shillings 9½ pence), were as follows: Opium, 32,350,000 taels, or 40 per cent of the total; cotton piece goods, 23,400,000 taels, or 30 per cent of the total; metals, 4,100,000 taels, or 5 per cent of the total; sundries, 19,450,000 taels, or 25 per cent of the total. Sundries comprised coal, raw cotton, agar-agar, timber, kerosene, needles, sugar, betel nuts, rice, paints, window glass, etc., no one item of which amounted to as much as a million taels. Kerosene, which made its first appearance in the customs in 1863, had by 1880 increased to 3,500,000 gallons. Paints amounted to about 100,000 taels and window glass had reached 56,000 boxes. Timber imports aggregated 590,000 taels. The customs reports relate the use of matches as confined to that

portion of the population living at or near the treaty ports, of which there were but 20 in 1880. Twenty-eight per cent of the space used in the description of China's import trade for 1880 is devoted to opium. In 1867 opium accounted for 46 per cent of China's total imports. In the early years of the trade of the United States with China, which had its inception with the birth of our Republic, ginseng constituted the main and for a time the sole article of American export to China. By 1880 the United States figures prominently in the cotton piece goods trade—American drills, sheetings, and jeans being particularly popular.

Of the exports for 1880, aggregating 78,000,000 taels, tea accounts for 40,000,000 taels, or about 50 per cent, and silk for 30,000,000 taels, or about 40 per cent. Sundries consisted of sugar, valued at 3,300,000 taels, straw braid, mats and matting, chinaware, fire-crackers, hides, musk, nutgalls, rhubarb, medicines, tobacco, beans

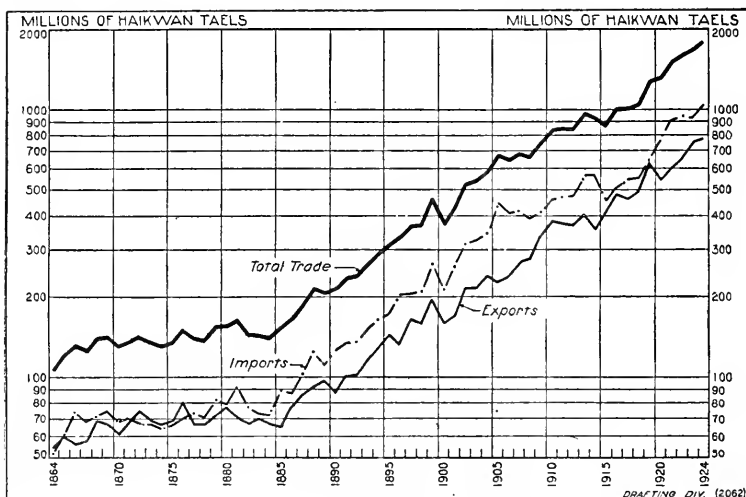


FIG. 2A.—China's foreign trade, 1864 to 1924 (logarithmic scale)

and bean cake, skins, hemp, grass cloth, and camphor, with no one of these items exceeding in value 200,000 taels.

DEVELOPMENT OF FOREIGN TRADE

In a perusal of the Decennial Returns of Trade for the decade 1882 to 1891, one is impressed with the first appearance in the Chinese market of Japanese cotton yarn, cotton piece goods, cotton socks, singlets, towels, handkerchiefs, matches, soap, copper ware, marine products, coal, and timber. Indian cotton yarn and cotton piece goods also made their appearance during this decade. Russian kerosene from Batum then entered the China market in competition with American kerosene. By 1890 the total imports of kerosene in China had risen to 35,000,000 gallons, just ten times those of 1880. About 1890 the smokestacks of modern factories

first appeared on the Chinese horizon. The Chinese Government was recognized as a new element in the market for industrial equipment, arsenals, mints, and other works. The Viceroy, Chang Chih Tung, startled the natives at Hankow with the erection of two large smokestacks, one at Wuchang for a big modern cotton-spinning mill, the other at Hanyang on the opposite side of the Yangtze River for the Hanyang iron works. Economically there was no reason for the location of an iron works at Hankow, for the ore and coke could be more advantageously handled at Tayeh, some distance down the river, where the iron-ore deposits were; but the Viceroy was anxious to view from his window the smoke rising from these modern industrial plants. Thus it may be said that with the year 1890 modern industrialism had its inception in China.

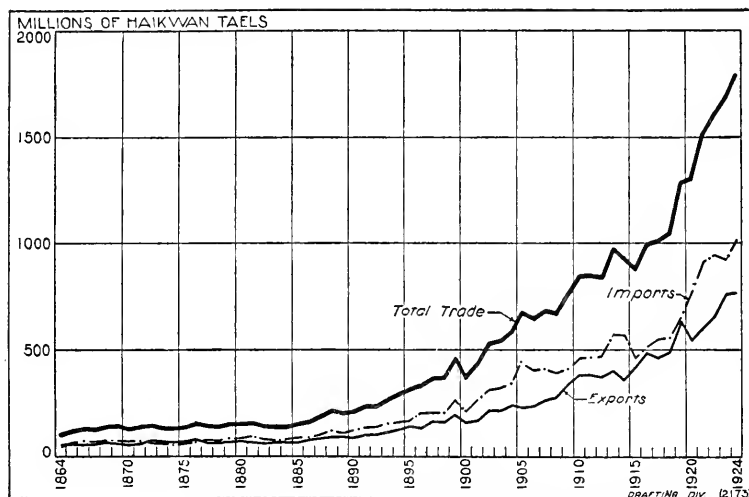


FIG. 2B.—China's foreign trade, 1864 to 1924 (arithmetic scale)

In commenting upon the increasingly responsive attitude of Chinese toward foreign manufactured goods, a report for Canton of the time makes the following statement:

For his cloth he (the Chinese) finds the foreigner's cotton yarn suitable; for his light, kerosene and matches; and for his workshops, metals and dyes. His taste for American flour may perhaps be attributed to the refining influence of Western civilization, further evidenced, we may hope, by his growing desire for condensed milk, of which over 12,000 dozen tins were imported in 1891. Among the officials and wealthier class of Chinese there has perhaps been of late a tendency to appreciate such foreign luxuries as armchairs, sofas, spring beds, etc., but it is doubtful whether there is any real or extended taste for these articles. Purchased as novelties very often, they doubtless in many cases come to be regarded as curios and are kept for show rather than use. The use of kerosene has perhaps of late years somewhat improved the lighting of Canton streets.

It is interesting to note that Canton capitalists living in San Francisco, where they came to appreciate the advantages of electricity, secured in 1890 a concession from the Canton authorities to supply

the cities of Kwangtung Province with electric lights. Shortly after, they commenced operations in Canton and installed a small plant, after considerable difficulty in leading the wires through the narrow streets of that very populous old Chinese city. This was the first Chinese electric-light venture. There is scarcely a report on the trade of a treaty port in China in 1890 which did not comment upon the gigantic strides made in the trade in kerosene in its successful competition with the native vegetable oils used for illuminating purposes. Thus by 1890, while opium still led in value any single item of foreign imports, with cotton piece goods a close second, the relative positions of these commodities in the import trade generally was greatly reduced by the increased trade in other lines.

In exports the outstanding comment throughout the customs trade reports of that time is the competition offered China's teas by the teas grown in the British colonies. One of the commissioners prophesied that "experiments in America in tea growing will undoubtedly place that country in serious competition with China in the tea markets of the world." By 1890 Japan had already become a prominent factor in the world's silk trade, and indications pointed to a serious competitor in China's silks in the production of Japanese filatures, which were developed along more modern lines and in keeping with demands of the markets abroad, rather than following the course of domestic needs. China's total foreign trade in 1890 was 36 per cent greater than that of the year 1880. Imports, however, had increased 60 per cent while exports had advanced only 12 per cent. Opium represented in 1890 about 25 per cent of the total imports.

The Decennial Customs Reports for 1890 comment quite freely upon the very substantial advances in the sales of American cotton drills, sheeting, and jeans in the various ports of China. The Ningpo commissioner of customs states that while at the beginning of the decade there was a preponderance of English drills, as shown by the imports of 15,600 pieces of English drills against 3,015 pieces of American drills for the year 1884, by 1891 the position was reversed, with 17,000 pieces of American drills and 4,800 English.

The reason given for the preference for American drills is that they are a stronger and firmer fabric, though 25 per cent dearer, hence considered by the Chinese more economical, especially for the making of tents, awnings, sails, and for other heavy wear.

LEADING ARTICLES OF IMPORT

By 1910, China's foreign trade aggregated 844,000,000 taels, or four times the total trade of 1890, and by 1923, the aggregate was 1,676,000,000 taels, or nearly double the figures for 1910. Imports for 1910 netted 463,000,000 taels (1 tael=U. S. \$0.66). For 1923 the imports netted 923,000,000 taels, or double those for 1910 (in 1923, 1 tael=U. S. \$0.80).

The following table shows, in order of their value, the leading articles entering into China's import trade in 1910 and 1923:

1910 IMPORTS

Principal items	Per cent of total trade	Value in haikwan taels ¹	Principal items	Per cent of total trade	Value in haikwan taels ¹
1. Cotton yarn.....	13	61,500,000	21. Medicines.....	(?)	3,000,000
2. Cotton goods.....	13	61,000,000	22. Wines, beers, etc.....	(?)	3,000,000
3. Opium.....	12	55,000,000	23. Clothing and hats.....	(?)	2,500,000
4. Rice.....	7	31,000,000	24. Soap.....	(?)	2,000,000
5. Metals.....	6	26,000,000	25. Cement.....	(?)	1,600,000
6. Kerosene (161,000,000 gallons).....	5	22,000,000	26. Building materials.....	(?)	1,300,000
7. Sugar.....	4½	21,000,000	27. Hardware.....	(?)	1,200,000
8. Railway materials.....	3	15,000,000	28. Needles.....	(?)	1,000,000
9. Marine products.....	2	12,500,000	29. Glassware.....	(?)	1,000,000
10. Machinery.....	2	9,000,000	30. Hosiery.....	(?)	1,000,000
11. Cigarettes and tobacco.....	2	9,000,000	31. Soda.....	(?)	1,000,000
12. Coal.....	2	8,000,000	32. Stationery.....	(?)	1,000,000
13. Dyes.....	1½	7,600,000	33. Candles.....	(?)	1,000,000
14. Matches.....	1	5,300,000	34. Window glass.....	(?)	900,000
15. Woolen goods.....	(?)	5,300,000	35. Haberdashery.....	(?)	900,000
16. Leather.....	(?)	5,000,000	36. Lamps and lamp ware.....	(?)	800,000
17. Cotton, raw.....	(?)	4,500,000	37. Ginseng.....	(?)	800,000
18. Paper.....	(?)	4,200,000	38. Paint.....	(?)	700,000
19. Flour.....	(?)	3,500,000	39. Boots and shoes.....	(?)	600,000
20. Tea.....	(?)	3,300,000	40. Clocks and watches.....	(?)	700,000
			41. Condensed milk.....	(?)	500,000

1923 IMPORTS

1. Cotton goods.....	14	132,000,000	29. Cement.....	(?)	3,300,000
2. Rice.....	10½	98,000,000	30. Chemicals.....	(?)	3,200,000
3. Kerosene.....	6	58,000,000	31. Sugar candy.....	(?)	3,200,000
4. Raw cotton.....	6	54,000,000	32. Soap.....	(?)	2,900,000
5. Sugar.....	5½	50,000,000	33. Perfumes.....	(?)	2,800,000
6. Cotton yarn.....	4½	42,000,000	34. Tin foil.....	(?)	2,600,000
7. Cigarettes and tobacco.....	4½	41,000,000	35. Pains.....	(?)	2,500,000
8. Machinery.....	4	35,700,000	36. Stationery.....	(?)	2,300,000
9. Flour.....	3	27,200,000	37. Motor cars.....	(?)	2,200,000
10. Marine products.....	3	25,000,000	38. Window glass.....	(?)	2,000,000
11. Dyes.....	2½	22,100,000	39. Rubber.....	(?)	2,000,000
12. Woolen goods.....	2	19,000,000	40. Clocks and watches.....	(?)	2,000,000
13. Paper.....	2	16,600,000	41. Ginseng.....	(?)	1,800,000
14. Coal.....	1½	13,000,000	42. Lamp and lamp ware.....	(?)	1,600,000
15. Clothing and hats.....	1½	12,800,000	43. Condensed milk.....	(?)	1,600,000
16. Lumber.....	1	9,600,000	44. Glass and glassware.....	(?)	1,500,000
17. Wheat.....	1	9,100,000	45. Chinaware.....	(?)	1,500,000
18. Railway materials.....	1	9,000,000	46. Hand tools.....	(?)	1,400,000
19. Medicines.....	(?)	7,700,050	47. Photographic materials.....	(?)	1,300,000
20. Leather.....	(?)	7,000,000	48. Hosiery.....	(?)	1,100,000
21. Copper ingots and slabs.....	(?)	5,800,000	49. Printing and lithographing materials.....	(?)	1,100,000
22. Wines, beers, etc.....	(?)	5,200,000	50. Needles.....	(?)	1,100,000
23. Bags.....	(?)	4,300,000	51. Matches.....	(?)	1,000,000
24. Paraffin wax.....	(?)	4,000,000	52. Telephone and telegraph materials.....	(?)	1,000,000
25. Fertilizers.....	(?)	4,000,000	53. Scientific instruments.....	(?)	1,000,000
26. Building materials.....	(?)	3,400,000	54. Cigars.....	(?)	900,000
27. Lubricating oil.....	(?)	3,300,000			
28. Soda.....	(?)	3,300,000			

¹ Value of haikwan tael in United States currency, 1910, \$0.66.

² Less than 1 per cent.

EXPLANATORY NOTES

Cotton goods.—The zenith of the cotton-goods and cotton-yarn trade was reached in 1920, when imports of piece goods netted 147,000,000 taels and yarns 79,000,000 taels. It must, however, be borne in mind that the silver exchange for 1920 was particularly favorable for imports, as 1 tael was equivalent in value to United States gold \$1.24; whereas the 1923 average rate for 1 tael was equal to United States gold \$0.80. With the increasing manufacture of cotton yarns and cotton piece goods in China, a decline in the importance of these commodities as imports may be considered a possibility.

Opium.—Opium disappeared entirely from the customs returns after the year 1917, by virtue of an agreement with Great Britain and the other Powers concerned. Owing, however, to the disordered internal conditions in China during the past few years, the opium poppy is grown extensively in some sections, where it is not only encouraged by provincial authority but in some instances the farmers are actually forced to grow it. This accounts in some

degree for the greatly increased rice imports for 1923, as many rice lands were given over to opium growing.

Rice.—In 1920 rice imports netted 5,300,000 taels; in 1922 they reached 80,000,000 taels; and in 1923, 98,000,000 taels. Poor crop conditions, combined with internal disorder and extensive opium planting seem to account for these unprecedented imports of rice, the cost of which doubled during the past decade. China's rice imports depend upon such a number of variable factors that it is difficult to generalize upon the subject.

Kerosene.—By 1923 kerosene jumped to third place in China's imports, with 215,000,000 gallons valued at 58,000,000 taels. The extension of kerosene consumption is due in large measure to the enterprising distributing methods employed by the foreign organizations in China and to the fact that vegetable oils have now become important articles of export instead of being used domestically for illuminating purposes.

Tobacco.—Items 11 (1910) and 7 (1923) indicate the remarkable development in the cigarette and leaf-tobacco trade. Thirty years ago China was an exporter rather than an importer of tobacco. Owing to enterprising Western methods of salesmanship, China is now one of America's principal customers for cigarettes and leaf tobacco. Imports of cigarettes for 1923 reached a value of 28,300,000 taels and leaf tobacco 12,700,000 taels, or a total of 41,000,000 taels, thereby placing tobacco products as seventh in importance in China's imports. The manufacture of cigarettes in China is rapidly growing into a big industry. The country has become an exporter of cigarettes, shipping them to the South Seas. The production of tobacco is improving both in quality and in quantity, and the consumption of tobacco products goes forward at a tremendous pace.

Raw cotton.—Imports of raw cotton for 1923 amounted to 54,000,000 taels and exports to 32,000,000 taels. Japan became an unusually heavy purchaser because of the emergency requirements following the great fire and earthquake of September 1 of that year. This fact in part accounts for China's unprecedentedly large imports of raw cotton for 1923 (which for 1922 amounted to but 19,000,000 taels). The rapid developments in the manufacture of cotton yarn and cotton cloth in China are increasing China's demands for raw materials. The country now produces about 2,000,000 bales of cotton. Raw cotton has attained a substantial place in China's list of exports because the short, kinky fiber is well adapted to the manufacture of blankets in the United States, and Japan finds China's cotton economical for mixing with longer staple cottons purchased elsewhere. China must also have a certain amount of longer staple cotton to mix with its native product for modern manufacture. However, as internal conditions improve the country will grow more and better cotton. Substantial progress in this direction has already been made. China should be able to raise the quantity and quality of cotton required for its domestic needs, even conceding that its requirements continue to expand.

Sugar.—Before the twentieth century China exported rather than imported sugar. Item 5 in the 1923 imports shows sugar imports valued at 50,000,000 taels. In the 1910 imports sugar held seventh place, aggregating in value but 21,000,000 taels. China has the soil, climate, and labor essential to the development of both cane and beet sugar industries, though little has as yet been done to put the sugar industry on a modern economic basis. The increased imports indicate an improvement in the purchasing power of the people.

Wheat.—During 1920 China exported wheat valued at 25,500,000 taels and flour valued at 18,000,000 taels. During 1923 imports of flour netted 27,200,000 taels and of wheat 9,100,000 taels. Poor wheat and rice crops are responsible in part for the heavy imports of 1923. When the price of rice is high in China, wheat consumption is increased. Furthermore, the Chinese are consuming larger quantities of wheat products, apparently because of an increasingly favorable attitude toward them. In spite, however, of the rapid developments in the flour-milling industry of the country, which now has an aggregate daily capacity of 125,000 barrels, it will be some years before China may be expected to become a regular exporter of flour. Lack of internal communications, disturbed political conditions, and antiquated farming methods combine against it.

Machinery and industrial supplies.—With the development of a modern industrial society, imports of metals, machinery, railway materials, building materials, hardware, lubricating oil, chemicals, and tools will continue to increase. This is evident from a comparative study of the imports of these

commodities as listed in the above tables and those for the years 1900 and 1890. These figures indicate the remarkable strides toward modernization as made by China during the past 20 years. In the next few decades even greater advances, relatively speaking, may be expected.

Marine products.—Sea foods figure in about the same relative position in both tables. No people have developed more highly than the Chinese the use of marine products in their dietary, and there are no indications of a lessened use of these foods. In fact, with an increase in the country's wealth, the imports of sea foods will undoubtedly grow proportionately. Foreign business men should study Chinese tastes in these commodities, as the resources of the West could contribute more to China's demands in marine products than they do at present.

Dyes.—Like many natural products of China which are processed by domestic handicraft, with a consequent lack of uniformity or standardization, vegetable indigo and other vegetable dyes are being replaced by western manufactured products. China's imports of artificial indigo for 1923 amounted to 15,000,000 taels and of aniline dyes 6,000,000 taels. The consumption of these products will undoubtedly increase with improved marketing conditions in China.

Coal.—For many years China was rated as a coal-importing country, but gradually its exports of coal are exceeding its imports. It is to be expected that with the increased development of China's coal resources the exports will become increasingly important. During 1923 coal to the value of 13,000,000 taels was imported, as compared with exports valued at 20,500,000 taels.

Woolen goods.—Woolen goods were imported in 1923 to the value of 19,000,000 taels. Gradually this trade is increasing. Although China produces considerable wool, which has become an important article of export, woolen manufactures are in their infancy, and domestic manufacture will not, for some time to come, seriously affect imports of woolen goods.

Paper.—The newspaper was a matter of little consequence in China before the beginning of the twentieth century. Paper imports for 1923 were four times those for 1910, owing, in the main, to the demand for newsprint. China's raw materials for paper manufacture are principally bamboo, rice straw, wheat straw, and certain grasses. Chinese manufactured paper appears in the items of exports, mostly for certain uses for the Chinese populations abroad. It is to be expected that the imports of newsprint and writing paper will increase from year to year.

Lumber.—Supplies of lumber in China are now a matter of economic transportation, hence lumber imports will for some time grow in importance rather than otherwise. Exports of timber for 1923 were, however, abnormally high, on account of the emergency demands created by the great fire and earthquake in Japan.

Clothing.—In 1923 five times as much clothing and hats was imported as in 1910. This is distinctive evidence of westernizing influences. Similarly, haberdashery increased from 900,000 taels in 1910 to 3,000,000 taels in 1923. Hosiery, garters, boots and shoes, perfumes, and toilet articles likewise show considerable increases. Native manufacture of most of these articles will undoubtedly in the future offer severe competition to the imported articles.

Medicines.—Medicines are increasing in importance in China's import trade, being in 1923 double the value of those for 1910. Many foreign proprietary medicines are now extensively marketed in China through enterprising advertising campaigns. At the same time, considerable quantities of Chinese medicines are shipped out, in the main for the use of Chinese abroad.

Leather.—Imports of leather in 1923 amounted to 7,000,000 taels, which represents a steady advance in the trade. The country is a heavy exporter of hides, and the tannery industry is in process of development. Thus it may be that leather importation will not continue to expand indefinitely.

Cement.—Similarly, native manufactures of cement will in time make China an exporter rather than an importer of a commodity which now appears among the articles of import.

Matches.—In 1910 matches appear as fourteenth in importance in China's imports, whereas in the 1923 tabulation matches dropped to fifty-first place, with an aggregate valuation of no more than 1,000,000 taels. Match-making materials are now of more importance in China's imports than are matches, of which the country is rapidly becoming an exporter.

Soap.—Soap will also become decreasingly important in China's import trade. The soaps manufactured in China 10 years ago were very poor imitations of the foreign products. To-day they compare well with imported soaps.

Copper.—Copper ingots and slabs will continue an important item of import, as the country has apparently very small available resources in copper.

Paraffin and candles.—Imports of paraffin are on the increase, indicating the development of the domestic candle-manufacturing industry. Candles as an article of import are no longer important.

Motor cars.—Motor cars do not appear in the 1910 customs returns. There is a very small mileage of surfaced motor roads in China, and probably less than 10,000 miles of graded roads which can be used for motor transportation. The gospel of good roads, however, is being spread among the people of the country, and with improved internal conditions it is to be expected that there will be a very considerable development in roads, hence in the use of motor vehicles. There are now (1926) but 14,000 motor vehicles in the whole of China.

Gasoline.—With the increased use of motor transportation, gasoline imports will naturally continue to increase. Those for the year 1923 amounted to 3,800,000 taels.

Window glass.—There is under construction in North China a large plant for the manufacture of window glass. Thus imports of window glass may not continue to increase materially.

Condensed milk.—Imports of condensed milk for 1923 were valued at 1,600,000 taels, or three times those of 1910. China has developed no dairy interests, and unless the soy bean is utilized for the production of imitation milk, the imports of condensed milk are likely to continue to increase.

Scientific instruments, photographic and lithographic materials.—Such items as scientific instruments, photographic materials, printing and lithographing materials, which are given a place in the 1923 returns, but do not appear in those of 1910, indicate a growth in modern industrial enterprise. This is bound to continue, and probably to a much greater extent in the future than in the past.

LEADING ARTICLES OF EXPORT

China's exports for the year 1910 netted 381,000,000 taels, which amount was double the value of exports in 1900 and more than four times that of the exports for 1890. Exports for 1923 aggregate 753,000,000 taels, or about double those of 1910.

1910 EXPORTS

Principal items	Per cent of total trade	Value in haikwan taels	Principal items	Per cent of total trade	Value in haikwan taels
1. Silk.....	21	85,000,000	18. Flour.....	(1)	3,500,000
2. Tea.....	9	35,000,000	19. Peanuts.....	(1)	3,000,000
3. Raw cotton.....	8	28,000,000	20. Hair, human.....	(1)	3,000,000
4. Beans and bean cake.....	8	27,000,000	21. Tobacco, leaf and prepared.....	(1)	3,000,000
5. Hides and skins.....	4	16,000,000	22. Furs.....	(1)	2,000,000
6. Sesame seed.....	4	14,500,000	23. Chinaware.....	(1)	2,000,000
7. Vegetable oils.....	3½	13,200,000	24. Ramie fiber.....	(1)	2,000,000
8. Provisions and vegetables.....	3	11,300,000	25. Nankeens.....	(1)	2,000,000
9. Straw braid.....	2	7,700,000	26. Rapeseed.....	(1)	2,000,000
10. Tin.....	1½	6,000,000	27. Coal.....	(1)	1,700,000
11. Wool.....	1½	5,000,000	28. Vegetable tallow.....	(1)	1,600,000
12. Bristles.....	(1)	4,500,000	29. Pig iron.....	(1)	1,500,000
13. Cattle.....	(1)	4,500,000	30. Lard.....	(1)	1,300,000
14. Mats and matting.....	(1)	4,300,000	31. Animal tallow.....	(1)	1,000,000
15. Firecrackers.....	(1)	4,000,000	32. Nutgalls.....	(1)	1,000,000
16. Eggs and egg products.....	(1)	4,000,000	33. Antimony.....	(1)	1,000,000
17. Paper.....	(1)	3,500,000			

¹ Less than 1 per cent.

1923 EXPORTS

Principal items	Per cent of total trade	Value in haikwan taels	Principal items	Per cent of total trade	Value in haikwan taels
1. Silk and silk goods.....	23	170,000,000	24. Mats and matting.....	(1)	4,500,000
2. Beans, bean cake and bean oil.....	15	127,400,000	25. Cotton yarn.....	(1)	4,400,000
3. Raw cotton.....	4	32,600,000	26. Lace.....	(1)	4,100,000
4. Eggs and egg products.....	4	29,600,000	27. Medicines.....	(1)	4,000,000
5. Tea.....	3	23,000,000	28. Chinaware.....	(1)	3,300,000
6. Timber.....	3	20,700,000	29. Intestines.....	(1)	3,300,000
7. Coal.....	3	20,300,000	30. Frozen meats and game.....	(1)	3,100,000
8. Hides and skins.....	2½	19,100,000	31. Firecrackers.....	(1)	2,900,000
9. Peanuts and peanut oil.....	2½	18,000,000	32. Ramie fiber.....	(1)	2,800,000
10. Wood oil.....	2½	17,500,000	33. Grass cloth.....	(1)	2,500,000
11. Wool.....	1½	12,900,000	34. Wheat.....	(1)	2,100,000
12. Sesame seed.....	1½	12,200,000	35. Rapeseed.....	(1)	2,000,000
13. Millet and kaoliang.....	1½	12,000,000	36. Cattle.....	(1)	1,600,000
14. Pig iron and iron ore.....	1	8,800,000	37. Hemp.....	(1)	1,600,000
15. Bristles.....	1	7,800,000	38. Antimony.....	(1)	1,500,000
16. Tin slabs.....	1	8,000,000	39. Nutgalls.....	(1)	1,400,000
17. Furs.....	(1)	5,600,000	40. Watches.....	(1)	1,400,000
18. Straw braid.....	(1)	5,400,000	41. Camphor.....	(1)	1,400,000
19. Bran.....	(1)	5,000,000	42. Varnish.....	(1)	1,400,000
20. Hair nets.....	(1)	4,800,000	43. Feathers.....	(1)	1,300,000
21. Carpets.....	(1)	4,700,000	44. Vegetable tallow.....	(1)	1,100,000
22. Nankeens.....	(1)	4,700,000	45. Licorice.....	(1)	1,000,000
23. Paper (Chinese).....	(1)	4,500,000	46. Lard.....	(1)	1,000,000
			47. Umbrellas.....	(1)	1,000,000

¹ Less than 1 per cent.

EXPLANATORY NOTES

Silk.—Raw silk and silk goods head both of these export lists, with about the same comparative percentages of the whole trade. In keeping with the developments in the export trade generally during the period, exports of silk and silk goods for 1923 are double those for 1910. This is due primarily to the greater position in the American market because of improved methods in sericulture and silk production during the last few years of the period.

Tea.—Tea dropped from second to fifth place in importance during the 13-year period. In fact, in 1920 tea exports from China aggregated only 9,000,000 taels. During the three years following, the trade recovered to a considerable degree, as the exports of 1923 amounted to 23,000,000 taels. This sum, however, is considerably less than that for 1910 and is in keeping with the general decline of the China tea trade over a number of decades following the development of tea growing in other sections of the world.

Beans.—Beans and bean products had by 1910 achieved a position of importance in China's export trade, although 20 years before these items did not command consideration, and by 1923 these products aggregated 127,000,000 taels, ranking second on the list of China's exports. This phenomenal development is one of the striking features of China's export trade. Seventy per cent of the beans produced in China are raised in Manchuria, hence it is with the development of this region that the bean industry has come into prominence.

Eggs and egg products.—Eggs and egg products advanced from sixteenth place in 1910 to fourth place in 1923, exports aggregating in that year nearly 30,000,000 taels. Had it not been for special tariff enactment by the United States, the egg exports from China to the former country would have been much greater. Apparently China's egg products have found a permanent place in foreign markets.

Minerals.—It is noteworthy that China is gradually coming to the fore as an exporter of coal. In 1910 coal exports amounted to but 1,700,000 taels, while in 1923 they aggregated 20,500,000 taels. On the other hand, the developments in pig iron and iron ore exports are less for 1923 than for several years prior thereto, although considerably above those for 1910. Antimony, which had risen during the World War to unprecedented figures in China's export trade, has dropped back to 1,500,000 taels, which is but 50 per cent greater than the exports for 1910, although China presumably possesses more than half of the world's resources in antimony. China's wealth in tin is demonstrated by the continuous exports of this mineral. In 1910 exports of tin amounted to 6,000,000 taels; in 1922 to 11,000,000 taels; but in 1923 they

receded to about 8,000,000 taels. As with iron and coal, the question of economic transportation is one which has much to do with the exploitation of China's tin resources.

Vegetable oils.—The 1910 returns of vegetable oils were lumped together, with the aggregate of 13,200,000 taels. In the 1923 returns they appear separately, bean oil amounting to 17,700,000 taels, peanut oil to 6,000,000 taels, and wood oil to 17,500,000 taels. The most striking development in this direction is that of the wood-oil trade. Chinese wood oil has found a permanent place in the markets of the West, being now considered indispensable in the manufacture of paints and varnishes.

Hides and skins.—While there has not been any considerable advance in exports of hides and skins, yet this trade will continue until China has established a tanning industry sufficient to consume its domestic supplies.

Grains.—In grains such as millets, kaoliang, and wheat, and certain other food products, the export trade will undoubtedly be of a sporadic nature, depending upon prices abroad, silver exchange and crop conditions in China, and other variable factors. Asiatic Russia, which has been China's steadiest customer for the products, may develop sufficient supplies to meet its own needs.

Bristles.—Exports of bristles have been greatly stimulated by the inability of the trade in Europe and America to secure supplies from Russia.

Sausage casings.—Pig intestines, known to the trade as sausage casings, have also become important articles of export from China, 1923 returns giving the value of exports as 3,300,000 taels.

Feathers.—A commodity which commands very little value in China is feathers. This product is now an article of export, which amounted in 1923 to 1,300,00 taels.

Meat and eggs.—Exports of cattle and beef from Tsingtao, principally to Japan, are a noteworthy development in China's foreign trade during the past decade. Japan is also a heavy purchaser of China's egg products. Frozen meats and game to the value of 3,100,000 taels were exported during 1923, but during the war years the exports were considerably greater. This trade will continue until the level of prices in China has been raised considerably.

Timber.—Timber export, which represents a value of 20,700,000 taels in the 1923 trade, is due to the demand created in Japan following the earthquake and fire of September, 1923. Otherwise China is not a substantial exporter of this product.

Nankeens.—The 1923 returns, giving China's exports of nankeens at 4,700,000 taels and cotton yarn at 4,400,000 taels, are substantial evidence in the customs returns of trade that cotton manufacturing in China is assuming a position of importance that is being felt in other markets.

Carpets and rugs.—An item which the World War has brought into prominence in China's export trade is carpets or rugs. The North China rug has evidently made a permanent place for itself in the American market. The exports of these rugs amount now to about \$5,000,000 gold a year.

Lace, hair nets, and furs.—Similarly, Chinese lace, embroideries, hair nets, and furs have become important items in China's trade with the United States.

Wool.—China's exports of wool increased in value from 5,000,000 taels in 1910 to 12,900,000 taels in 1923. This wool finds a market in the United States for manufacture into carpets, where it is admitted free when used in this industry. There are no indications that China will soon consume its surplus of wool stocks in domestic manufacture.

Chinaware.—An industry in China which possesses great potentialities in foreign trade when the industry is modernized and properly organized is the manufacture of porcelain and chinaware. China's imports and exports of this commodity are about equal, but the demand for Chinese porcelain and chinaware from abroad is very considerable and an expansion of the trade in these products only awaits the modernization of the industry.

IMPORT AND EXPORT TRADE IN 1923 AND 1924

The following tables show the import and export trade of China during the calendar years 1923 and 1924, and the distribution of such trade according to countries of origin and destination.

NET IMPORTS OF FOREIGN MERCHANDISE INTO CHINA DURING CALENDAR YEARS
1923 AND 1924

Articles	1923		1924	
	Quantity	Value in thousands of haik-wan taels	Quantity	Value in thousands of haik-wan taels
TEXTILES AND MATERIALS				
Cotton, raw.....piculs..	1,614,371	53,816	1,241,881	40,076
Cotton manufactures:				
Shirting and sheetings—				
American.....pieces..	16,818	121	16,993	131
English.....do.	2,732,198	18,174	3,718,393	26,830
Japanese.....do.	2,986,040	18,475	3,002,115	19,222
Other kinds.....do.		4,464		8,875
Drills and jeans—				
American.....do.	1,702	10	20,584	121
English.....do.	178,627	1,062	219,272	1,358
Japanese.....do.	2,126,893	11,138	1,762,362	9,579
Other kinds.....do.	1,929	11	500	4
Canvas and cotton duck.....yards.	3,108,872	1,088	2,516,134	883
Cotton yarn and thread.....piculs..	1,989,938	43,554	1,793,684	36,261
Velvets and velveteens.....	2,681,489	1,545	2,695,163	1,465
Wool and cotton mixtures.....		8,508		11,241
Woolen goods.....		19,042		17,693
Silk piece goods.....catties..	64,417	804	69,925	1,000
Silk goods, artificial.....yards.	1,767,976	815	2,883,203	1,598
Silk mixtures.....catties..	382,331	1,459	387,245	1,524
Miscellaneous piece goods.....		4,225		5,974
Bags, all kinds.....		5,889		7,763
Carpets and carpeting.....		364		379
Clothing (including haberdashery, hosiery, hats, etc.).....		10,941		10,501
All other.....		76,284		86,345
Total textiles and materials.....		281,809		288,823
METALS AND MINERALS				
Aluminum, all kinds.....piculs..	3,007	181	3,859	199
Brass and yellow metal.....		1,507		1,924
Copper ingots.....piculs..	230,464	5,814	564,970	13,178
Copper manufactures.....		1,005		1,152
Iron and steel manufactures:				
Bamboo steel, hoops, etc.....piculs..	108,489	707	144,354	967
Bars.....do.	1,150,072	4,686	1,924,872	6,813
Cobbles and wire shorts.....do.	415,890	1,266	478,454	1,509
Galvanized-iron sheets.....do.	302,123	2,746	327,152	3,008
Other sheets and plates.....do.	451,140	2,021	746,866	3,189
Pipes and tubes.....do.	236,532	2,032	273,046	2,171
Rails.....do.	389,497	1,568	946,521	3,005
Wire, including rope.....do.	139,591	1,369	234,972	2,097
Tinned plates.....do.	493,162	4,647	892,819	8,459
Nails and rivets.....do.	254,635	1,745	666,155	4,033
Plate cuttings.....do.	398,266	1,156	631,516	1,712
Angles and tees.....do.	137,011	535	227,908	811
Cutlery.....		512		651
Enameled ware.....		1,251		2,053
Hand tools.....		948		1,115
Machine tools.....		463		638
Needles.....thousands..	3,253,561	1,157	4,849,316	1,684
Iron and steel manufactures, miscellaneous.....		429		544
Saws and steel doors.....		231		250
Stoves and grates.....		456		511
Lead:				
Pig or bars.....piculs..	164,237	1,455	159,567	1,552
Tea and sheet.....do.	8,171	84	5,644	68
Tin slabs.....do.	58,511	3,362		
Tin foil and other foils.....	110,281	2,633	106,092	2,348
Zinc spelter, sheets, etc.....piculs..	29,985	424	36,026	498
All other metals.....		4,953		10,882
Total metals and minerals.....		51,373		77,021
SUNDRIES				
Arms and ammunition.....		912		1,973
Automobiles, trucks, and motor cycles.....		2,264		3,303
Bêche de mer.....piculs..	43,555	2,175	48,263	2,509
Birds' nests.....do.	94,530	1,051	92,480	1,099
Building materials:				
Bricks and tiles.....pieces..	3,417,653	317	5,625,175	454
Cement.....piculs..	1,654,868	3,251	1,787,484	2,074

NET IMPORTS OF FOREIGN MERCHANDISE INTO CHINA DURING CALENDAR YEARS
1923 AND 1924—Continued

Articles	1923		1924	
	Quantity	Value in thousands of haik-wan taels	Quantity	Value in thousands of haik-wan taels
SUNDRIES—continued				
Buttons, all kinds.....gross..	1,858,583	425	2,586,903	510
Casks, empty.....		513		692
Cereals and cereal products:				
Bran.....piculs..	2,891,497	5,422	3,492,513	8,370
Macaroni and vermicelli.....do..	88,216	1,384	98,146	1,509
Rice and paddy.....do..	22,434,962	98,199	13,198,054	63,249
Wheat.....do..	2,595,190	9,096	5,145,367	17,690
Wheat flour.....do..	5,826,540	27,233	6,657,162	30,098
Chemical products, including match-making materials, medicines, etc.....		16,578		17,203
China ware, all kinds.....		1,569		1,751
Clocks and watches.....pieces	555,300	2,074	1,232,499	3,100
Coal.....tons	1,366,108	12,861	1,610,016	15,160
Dyes, colors, paints, and varnish:				
Aniline.....		7,943		10,611
Indigo, artificial.....piculs..	256,102	11,817	421,214	21,585
Other.....		6,566		6,580
Electrical materials.....		9,205		9,247
Fish and fish products.....piculs	1,852,251	19,461	2,525,304	23,860
Furs (skins).....pieces	1,356,193	1,146	1,142,888	1,165
Fruits:				
Dried.....piculs	193,799	2,396	186,284	2,035
Fresh.....do..	246,426	1,536	293,173	1,726
Furniture and materials, including bedsteads, mirrors, etc.		3,415		3,439
Ginseng.....catties	202,618	1,872	184,093	1,606
Glass and glassware.....		3,465		4,913
Hides and skins, raw.....piculs	37,817	1,045	33,748	863
Instruments and apparatus.....		1,024		1,210
Lamps and lampware.....		1,655		2,190
Leather.....piculs	137,271	6,864	156,543	7,601
Leather manufactures, including belting, boots and shoes, etc.....		1,283		1,278
Lumber:				
Hardwood.....		4,425		4,771
Softwood.....square feet	125,136,134	5,270	287,824,072	11,349
Machinery:				
Agricultural.....		302		279
Textile.....		12,316		5,710
Sugar refining, distilling, etc.....		12,482		12,783
Boilers, turbines, etc.....		1,474		1,906
Milk, canned.....		1,818		1,858
Mineral oil:				
Kerosene, total.....gallons	214,835,669	58,292	223,207,104	57,811
American.....do..	179,139,245	48,017	177,342,680	46,487
Borneo.....do..	5,139,541	1,405	7,013,540	1,611
Persian.....do..	4,274,294	1,411	6,090,388	1,650
Sumatra.....do..	25,216,439	7,315	31,268,943	7,632
Lubricating oil.....do..	7,499,880	3,279	9,129,302	3,581
Fuel oil.....tons	57,267	1,469	104,025	2,306
Gasoline, naphtha, etc.....gallons	6,307,815	3,849	7,265,093	4,068
Paper and paper products, including stationery.....		18,950		23,073
Paraffin wax.....piculs	510,286	4,048	576,934	5,902
Photographic materials.....		1,344		1,613
Printing materials.....		1,139		1,572
Railway materials and supplies.....		7,057		8,784
Cars.....		1,728		2,145
Locomotives and tenders.....		1,170		1,065
Rattans, all kinds.....piculs	145,919	1,521	151,839	1,715
Sandalwood.....do..	123,105	1,337	150,966	1,993
Spices, all kinds.....do..	106,514	1,735	79,198	1,487
Sugar, all kinds.....do..	5,823,399	48,776	8,905,678	72,127
Sugar cones and candy.....do..	610,965	5,556	506,194	4,425
Tobacco.....piculs	315,312	12,691	683,152	24,640
Cigars and cigarettes.....thousands	10,142,148	28,979	9,778,697	28,397
Toilet preparations, including perfumery.....		3,541		3,379
Umbrellas, all kinds.....pieces	1,669,964	1,082	2,392,466	1,516
Soap and materials.....		2,574		3,282
All other sundries.....		19,544		30,797
Total sundries.....		590,221		652,367
Total imports.....		923,403		1,018,211

EXPORTS OF CHINESE MERCHANDISE TO FOREIGN COUNTRIES, CALENDAR YEARS, 1923 AND 1924

Articles	1923		1924	
	Quantity	Value in thousands of hai-kwan taels	Quantity	Value in thousands of hai-kwan taels
TEXTILES AND MATERIALS				
Carpets.....		4, 691		5, 989
Cotton, raw..... piculs	974, 574	32, 606	1, 080, 019	40, 420
Cotton manufactures:				
Shirtings and sheetings..... pieces	641, 483	3, 733	1, 370, 222	8, 180
Nankens..... piculs	75, 605	4, 704	53, 656	3, 409
Yarn..... do	89, 001	4, 370	147, 031	7, 513
Fur clothing and rugs..... pieces	729, 668	1, 218	2, 033, 524	3, 067
Hemp..... piculs	129, 234	1, 607	158, 128	2, 232
Ramie fiber and thread..... do	167, 488	3, 131	285, 366	5, 172
Grass cloth..... do	21, 197	2, 540	24, 614	3, 544
Laces..... do		4, 112		4, 640
Silk and silk products:				
Cocoons..... do	19, 326	1, 745	26, 378	2, 251
Raw..... do	138, 423	138, 916	315, 830	108, 060
Waste..... do	128, 118	11, 560	158, 177	10, 302
Piece goods..... do	14, 533	16, 829	13, 303	15, 746
Pongee..... do	13, 962	7, 719	14, 019	6, 555
Other silk products..... do		3, 868		4, 466
Wool.....				
Camel..... do	55, 618	2, 259	37, 950	1, 991
Sheep..... do	352, 109	10, 079	485, 320	14, 041
All other textiles and materials..... do		4, 482		4, 536
Total textiles and materials.....		260, 169		252, 114
METALS AND MINERALS				
Antimony..... piculs	275, 420	1, 672	217, 566	2, 034
Iron ore and pig..... do	13, 585, 020	8, 749	18, 503, 330	11, 278
Tin slabs..... do	133, 225	7, 875	117, 353	9, 088
Tungsten..... do	66, 929	790	50, 325	555
Zinc ore..... do	1, 009, 672	695	338, 241	22
All other..... do	2, 905, 297	2, 020	1, 126, 598	2, 191
Total minerals.....		21, 801		25, 168
SUNDRIES				
Bamboo and bamboo ware.....		1, 403		1, 484
Bristles..... piculs	74, 422	7, 758	65, 540	8, 742
Camphor..... do	15, 103	1, 421	10, 711	994
Casings..... do		3, 319		3, 893
Cereals and cereal products:				
Bean cake..... piculs	24, 755, 869	56, 866	22, 577, 716	50, 897
Beans..... do	18, 266, 266	52, 416	24, 589, 687	76, 066
Maize..... do	357, 829	710	228, 908	560
Rice and paddy..... do	63, 089	337	41, 935	227
Rapeseed..... do	492, 120	2, 004	502, 616	2, 087
Sesame seed..... do	1, 926, 379	12, 161	934, 191	6, 501
Seed cake..... do	1, 318, 240	2, 979	1, 253, 484	2, 626
Verriacelli and macaroni..... do	255, 902	2, 913	276, 986	3, 594
Bran..... do	2, 721, 474	4, 981	3, 263, 462	6, 272
Wheat..... do	639, 919	2, 173	140, 155	541
Wheat flour..... do	131, 553	783	157, 285	714
Millet and kaoliang..... do	3, 362, 135	11, 770	4, 130, 649	16, 549
Coal..... tons	3, 108, 632	20, 545	3, 202, 352	20, 339
Eggs:				
Albumen and yolk..... piculs	377, 535	12, 367	457, 048	16, 659
Fresh and preserved..... thousands	1, 101, 049	11, 491	944, 253	9, 893
Frozen..... do	375, 365	5, 764	252, 392	4, 972
Feathers, all kinds..... do	73, 024	1, 256	84, 072	2, 048
Fish and fishery products..... do	194, 468	2, 326	167, 238	2, 215
Furs..... pieces	7, 366, 551	5, 551	7, 169, 751	6, 094
Hair, human..... piculs	30, 039	983	28, 202	1, 136
Hair nets..... do		4, 840		2, 677
Hides and skins:				
Buffalo and cow..... piculs	293, 740	9, 266	227, 694	6, 344
Goatskins—				
Tanned..... do	1, 406, 392	1, 965	1, 110, 420	1, 744
Untanned..... do	7, 353, 207	5, 501	4, 679, 873	3, 339
Meat and meat products:				
Frozen meat..... do	295, 576	2, 431	257, 832	3, 039
Lard..... do	51, 925	809	61, 733	1, 016
Tallow..... do	47, 352	646	64, 804	829

EXPORTS OF CHINESE MERCHANDISE TO FOREIGN COUNTRIES, CALENDAR YEARS, 1923 AND 1924—Continued

Articles	1923		1924	
	Quantity	Value in thousands of haikwan taels	Quantity	Value in thousands of haikwan taels
SUNDRIES—continued				
Nuts:				
Chestnuts..... piculs..	42, 240	290	44, 771	314
Peanuts—				
Shelled..... do.....	1, 374, 693	8, 047	2, 063, 414	16, 958
Unshelled..... do.....	871, 832	3, 999	964, 383	4, 450
Walnuts..... do.....	45, 890	3, 995	75, 177	1, 201
Paper and paper products..... do.....	319, 309	4, 833	344, 846	5, 124
Pottery and earthenware..... do.....	213, 197	951	217, 177	1, 203
Salt..... do.....	3, 706, 470	1, 770	3, 340, 529	1, 581
Straw braid..... do.....	83, 911	5, 444	76, 552	5, 516
Sugar, all kinds..... do.....	363, 001	2, 451	149, 898	1, 091
Sugar candy and canes..... do.....	507, 420	632	257, 956	324
Tallow, vegetable..... do.....	96, 348	1, 086	114, 856	1, 330
Tea:				
Black..... do.....	450, 686	13, 992	402, 776	12, 026
Green..... do.....	284, 630	8, 361	282, 314	8, 363
Tobacco:				
Leaf..... do.....	222, 724	3, 570	208, 232	3, 424
Prepared..... do.....	56, 187	2, 217	56, 957	2, 128
Varnish..... do.....	19, 374	1, 556	18, 268	1, 332
Vegetables, dried, fresh, etc..... do.....	726, 655	1, 725	681, 047	1, 824
Umbrellas, paper..... pieces..	4, 962, 432	4, 594	4, 913, 834	1, 175
Mats and matting..... do.....	.....	.....	.....	4, 878
Licorice..... piculs..	75, 987	1, 045	44, 531	630
Lumber:				
Hardwood..... cubic feet..	505, 732	521	548, 592	404
Softwood..... square feet..	192, 402, 694	11, 746	111, 403, 821	3, 470
Poles..... pieces.....	2, 402, 385	9, 034	2, 533, 119	9, 502
Fruit, dried, preserved, etc..... piculs..	197, 428	2, 414	142, 663	1, 536
China ware..... do.....	243, 760	3, 298	215, 594	2, 799
Matches..... gross.....	3, 699, 157	1, 375	1, 793, 347	701
Oils, vegetable:				
Bean oil..... piculs..	2, 126, 928	17, 689	2, 121, 470	20, 484
Peanut oil..... do.....	467, 140	6, 175	672, 268	8, 452
Wood oil..... do.....	836, 887	17, 477	890, 038	17, 715
All other..... do.....	.....	83, 342	.....	90, 076
Total sundries.....	.....	470, 947	.....	494, 502
Total exports.....	.....	752, 917	.....	771, 784

NOTE.—The exports do not include exports to foreign countries by junks.

DISTRIBUTION OF TRADE BY COUNTRIES OF ORIGIN AND DESTINATION, CALENDAR YEARS 1923 AND 1924

[In thousands of haikwan taels]

Countries	Gross imports		Exports	
	1923	1924	1923	1924
Hongkong.....	248, 083	243, 919	175, 796	173, 163
Japan.....	211, 024	254, 762	198, 517	201, 176
United States.....	154, 143	190, 957	126, 804	100, 755
Great Britain.....	139, 397	126, 011	43, 207	50, 251
Belgium.....	10, 879	18, 278	2, 753	3, 420
Canada.....	10, 327	15, 576	2, 001	1, 107
Dutch East Indies.....	13, 600	20, 733	8, 085	9, 317
France.....	7, 549	10, 560	39, 578	45, 096
Germany.....	32, 456	38, 688	11, 915	15, 949
India.....	55, 241	38, 828	12, 329	11, 436
Italy.....	3, 735	6, 273	9, 468	8, 948
Chosen.....	11, 955	11, 505	30, 281	30, 855
Netherlands.....	3, 908	20, 460	8, 511	13, 501
Russia and Siberia.....	10, 203	10, 098	34, 092	46, 359
Straits Settlements.....	9, 214	9, 322	17, 928	19, 617
Other.....	48, 615	43, 132	31, 652	40, 834
Total.....	948, 634	1, 039, 102	752, 917	771, 784

VALUE OF DIRECT FOREIGN TRADE OF PRINCIPAL CHINESE PORTS, CALENDAR YEARS 1923 AND 1924

[In thousands of haikwan taels]

Ports	Imports		Exports	
	1923	1924	1923	1924
Harbin district ¹	9,236	9,439	33,860	45,302
Antung.....	26,818	23,827	41,906	32,417
Dairen.....	68,416	77,160	113,907	125,700
Newchwang.....	11,920	11,911	3,928	2,948
Tientsin.....	76,178	76,122	49,954	47,825
Kiaochow.....	32,808	34,620	24,674	39,914
Hankow.....	38,552	18,849	16,278	19,849
Shanghai.....	417,870	483,470	276,838	276,435
Amoy.....	12,090	18,591	3,573	4,067
Swatow.....	29,040	26,828	12,800	12,790
Canton.....	73,846	54,020	90,228	82,776
Kowloon (including railway traffic).....	35,106	51,671	18,621	20,962
Lappa.....	18,064	21,886	3,785	5,006
Kongmoon.....	15,021	13,339	2,697	1,782
Mengtz.....	13,659	14,845	9,043	9,976
All other.....	70,010	107,524	50,825	44,015
Total.....	948,634	1,039,102	752,917	771,784

¹ Harbin district includes Lahasusu, Manchouli, Harbin, and Suifenho. Antung includes Tatungkow.

GENERAL TRADE NOTES

Invisible imports.—In any statement of China's trade balance, it is necessary to take cognizance of certain invisible imports. The American consul at Hongkong estimates that \$250,000,000 silver is remitted annually to that British colony by Chinese in other countries, for purchases, remittances to relatives, and investments. It is probably safe to estimate a total of \$100,000,000 silver in remittances from the Canton communities abroad to Cantonese in China. It is estimated that Swatow receives annually \$30,000,000 silver from its nationals abroad, and that Amoy receives \$20,000,000 silver. American contributions to missionary and other philanthropic work in China aggregate at least \$25,000,000 silver a year. The cost of the maintenance of foreign diplomatic missions, foreign men-of-war in Chinese waters, the foreign expeditionary forces in China, and foreign shipping in China amount to probably \$20,000,000 silver a year. Tourists' expenditures may be reckoned at about \$10,000,000 silver. The aggregate of these invisible imports would probably net at least \$300,000,000 silver a year. To this sum may be added investments of foreign capital in China. China's unfavorable trade balance amounts to about \$300,000,000 silver a year, and the excess of imports of silver over the exports amounts to about \$75,000,000 silver annually. China incurs an additional obligation of about \$150,000,000 silver a year in foreign exchange to meet its debt service. (In these calculations \$1 silver may be taken as equivalent to \$0.50 United States gold.)

Movement of silver.—For the five years, 1919–1923, China imported silver bars and silver coin to the equivalent of 448,000,000 taels, and exported 163,000,000 taels, or an average excess of imports yearly of 57,000,000 taels or \$80,000,000 silver (United States gold at the 1923 rate, \$46,000,000). The tendency of the silver dollar to replace the tael unit in China's silver currency is worthy of note.

Silver exchange.—Silver exchange is a factor of commanding importance to China's import and export trade. During 1920, because of the unprecedented heights to which silver advanced, there were numerous failures in business, and foreign business concerns in China suffered severely following the sudden fall in silver exchange.

When the silver dollar reached an equivalent of \$1.20 gold, China lost an exceptional opportunity to refund its foreign obligations and pay off its railway loans.

Extraterritorial rights.—One of the results of the European war was to deprive German, Austrian, and Russian citizens of their extraterritorial rights in China. This makes for complications in the relations of Chinese with

foreigners, as the citizens of those countries without extraterritorial rights are under the jurisdiction of Chinese laws and courts, while those enjoying extraterritorial rights are under the laws and courts of their respective nations.

Foreign business moving inland.—In former years the foreign trader confined the vast bulk of his business transactions in China to a comparatively few Chinese located at coastal or river-treaty ports. Closer contact with the consumers and producers is now essential and foreign business is penetrating the interior.

Salesmanship necessary.—There is a very noticeable tendency toward specialization in import and export lines in China, particularly with China's large imports of industrial equipment. Men who are thoroughly familiar with the commodities handled are supplanting general import and export merchants. In other words, service and skilled salesmanship are increasingly important factors to successful business with the Chinese.

Increased costs in business.—The expenses of conducting business in China have increased very considerably during the past 10 years. Living costs have advanced about 100 per cent and labor upward of 50 per cent. The copper cash, nominally worth one-tenth of 1 cent silver, has been superseded in all except the more remote sections of the country by the copper cent piece, indicating a higher living cost among the masses and at the same time an increased purchasing power.

Industrial development.—The extensive development of modern industry and manufacturing among the Chinese during the past two decades is significant. The character of the products manufactured has improved very appreciably. The organization of numerous modern banks among Chinese communities has been marked. During the past 10 years over 100 modern-type Chinese banks with an aggregate paid-up capital of more than \$300,000,000 silver have been opened in Shanghai.

Japanese investments.—The heavy investments of Japanese capital in industrial projects during the past few years is indicative of Japanese confidence in the future economic development of China.

Good-roads movement.—The agitation for good roads during the past 10 years has resulted in the construction of about 8,000 miles of graded dirt roads to serve motor traffic. The greater receptivity of the Chinese to the needs of economic transportation is distinctly encouraging to the establishment of a modern economic society.

Miscellaneous.—China, like America, is continental; hence the internal development of the country will offer to the capital, brains, and energies of its people better prospects than can come through direct interest in foreign trade, for which the Chinese have not as yet developed the shipping facilities, insurance organizations, banking houses, or business establishments with their oversea connections. Thus, as internal conditions in China improve, foreign traders may expect increasingly larger opportunities for business in China through organizations especially developed.

In spite of disturbed political conditions in China, trade, modern construction work, and modern industrial developments increase year by year; therefore tremendous strides should follow any marked improvement in the direction of political stability.

TRADE WITH SPECIFIC COUNTRIES

TRADE WITH UNITED STATES

The Chinese customs returns from 1867 to 1913 show that the direct trade of China with the United States netted less than 9 per cent of China's total foreign trade. In fact, trade with the United States ranged from 6.5 per cent to 9 per cent of China's total. It is very difficult, indeed, impossible, to apportion the actual amount of China's trade with the United States, for the reason that exports from Hongkong, which are in reality goods transhipped through Hongkong to other countries, are merely credited to the trade of Hongkong. Similarly, imports from abroad coming through Hongkong and transhipped to Chinese ports appear in the customs returns

as credited to Hongkong. As a very considerable amount of American trade with China, particularly with South China, passes through the port of Hongkong, the United States loses credit in the Chinese customs returns for much of its trade. To a lesser extent some of the United States trade with China is transhipped through Japan and has been accredited to Japan. Up to the year 1913 these discrepancies were not a considerable factor; but since then, with the increase in America's trade with China these discrepancies have become a matter of great importance. A table is given below showing the value of China's direct trade with the United States, as taken from reports of the Chinese Maritime Customs, for the years 1904, 1913, and 1923. Values are converted into United States gold currency.

Years	Imports from United States	Exports to United States	Total trade with United States	Per cent of China's total trade
1904.....	\$20,368,300	\$18,907,407	\$39,275,707	9
1913.....	25,826,427	27,447,069	53,273,496	7
1923.....	123,558,120	101,443,019	225,001,139	17

It is worth while to analyze the 1923 figures to ascertain the extent of the discrepancy between China's actual trade with the United States and the trade as accredited by the Chinese Maritime Customs.

As for China's exports to the United States, shippers of Chinese commodities who invoice these commodities for shipment direct to the United States are obliged to cover the shipments with consular invoices, which are used for the United States customs entry purposes. The aggregate of the consular invoices of declared exports from the various ports of China to the United States for 1923 was \$178,216,127 gold. The declared exports from Hongkong to the United States for 1923 amounted to \$13,664,233 gold. Conservatively speaking, we might consider that \$8,000,000 of the Hongkong exports represents Chinese goods. This would make the exports from China roughly \$186,000,000. The United States statistics of foreign trade show that for the calendar year 1923 United States imports from China aggregated \$186,602,172, and that imports from Hongkong were \$19,860,635. For that same year imports from Dairen were also given separately as \$4,354,944, which gives a total of about \$210,000,000 United States gold for imports from China and Hongkong. Thus, roughly speaking, we may say that the United States figures show imports into the United States from China of about \$200,000,000 United States gold for 1923. These figures are practically double those of the trade returns of the Chinese customs.

The principal single item showing a discrepancy between the customs trade returns and the figures as shown by the United States Government agencies is raw silk, particularly at Canton. The Chinese returns accredit the bulk of the silk, which in reality moves from Canton to the United States, as exports to Hongkong, although actually invoiced at Canton for shipment to the United States via Hongkong. It is probably safe to estimate that about \$35,000,000 (gold) worth of raw silk exported from China was not credited to China's trade with the United States.

Concerning China's imports from the United States, it is more difficult to estimate the amount of the discrepancies in the Chinese customs figures, because of the lack of reliable checking agencies.

The imports into Hongkong from the United States for the year 1923 netted £5,860,000, or about \$27,000,000 United States gold. Over 50 per cent of these imports consisted of flour and kerosene for transshipment to China. Of the remaining items ginseng, cigarettes, tin plate, leaf tobacco, raw cotton, machinery, fertilizers, raisins, and old newspapers constituted the greater part. These were also primarily for China. It is safe to assume that \$20,000,000 of these imports entered into the trade of China. This sum would increase China's imports from the United States to about \$150,000,000 gold and give the United States 20 per cent of China's import trade.

China's exports to the United States for 1923 may be conservatively estimated at \$180,000,000 gold, or about 30 per cent of China's total export trade. Thus, China's total trade with the United States in 1923 aggregates at least \$320,000,000 gold, or 24 per cent of the former country's total foreign trade.

DIRECT TRADE WITH FOREIGN COUNTRIES

Statistics showing the value of China's direct trade with separate countries for 1913 and 1923 appear below. The figures are taken from the Chinese Maritime Customs returns of trade, and haikwan taels are converted to United States gold. (The haikwan tael was equivalent to \$0.73 in 1913 and to \$0.80 in 1923.)

Countries	Imports		Exports		Total	
	1913	1923	1913	1923	1913	1923
Australia. New Zealand, etc.	\$511,770	\$2,690,604	\$390,994	\$1,191,212	\$902,764	\$3,881,816
Austria-Hungary	3,004,875	79,589	1,130,078	96,676	4,134,953	176,265
Belgium	11,540,680	8,703,000	4,772,324	2,202,525	16,313,005	10,905,525
British India	35,205,007	44,192,785	4,512,734	9,803,444	39,717,741	54,056,229
Canada	1,360,121	8,261,899	475,587	1,600,607	1,835,699	9,862,506
Chosen (Korea)	2,571,096	9,563,952	4,966,654	24,224,904	7,537,750	33,788,856
Denmark	73,520	892,228	211,042	1,206,054	284,562	2,098,282
Dutch East Indies	4,984,020	10,880,260	1,899,089	6,468,265	6,883,110	17,348,525
France	3,863,348	6,038,923	29,706,591	31,662,127	33,569,939	37,701,050
French Indo-China	3,486,086	14,750,929	1,375,676	3,210,171	4,861,762	17,961,100
Germany	20,632,450	25,964,853	12,411,388	9,531,774	33,043,840	35,496,627
Hongkong ¹	125,122,711	198,366,764	85,386,791	140,636,999	210,509,510	339,103,763
Italy	483,802	2,988,377	6,063,850	7,574,240	6,547,652	10,562,617
Japan (including Formosa)	87,003,716	168,819,437	47,781,710	158,813,875	134,785,417	327,633,312
Macao	4,808,592	4,988,655	3,610,284	3,174,006	8,418,876	8,162,661
Mexico and Central America	5	5,199	43,082	28,640	43,087	33,839
Netherlands	1,037,997	3,126,577	6,336,807	6,808,834	7,374,804	9,935,411
Norway	253,393	1,622,375	1,973	29,547	255,366	1,651,922
Philippine Islands	1,015,219	1,088,124	555,967	3,185,256	1,571,186	4,273,380
Portugal	855	3,434	13,446	9,121	14,301	12,555
Russia						
European ports	214,030	132,545	3,636,052	6,959	3,850,083	139,504
Land frontier	8,936,224	4,686,824	2,256,857	1,289,584	11,193,081	5,976,408
Amur ports	375,457	86,996	5,809,447	454,829	6,184,904	541,825
Pacific ports	6,623,754	3,255,888	21,045,372	25,522,244	27,669,126	28,778,132

¹ Much of what is entered at Hongkong, both in the import and the export trade, represents goods for transshipment.

Countries	Imports		Exports		Total	
	1913	1923	1913	1923	1913	1923
Siam.....	\$38,088	\$5,007,708	\$1,478,337	\$2,708,210	\$1,516,425	\$7,715,918
Singapore, Straits Settlements, etc.	6,513,918	7,370,977	5,505,926	14,342,249	12,019,844	21,713,226
South Africa (including Mauritius)	7	20,364	45,734	150,212	45,741	170,576
South America.....	126	37,081	48,195	103,098	48,321	140,179
Spain (including Gibraltar).....	2,468	23,518	277,691	1,102,493	280,159	1,126,011
Sweden.....	1,123,381	1,770,631	166,188	229,413	1,290,069	2,000,044
Switzerland.....	42,307	2,843,569	34,773	6,272	77,080	2,89,831
Turkey, Persia, Egypt, Aden, etc.....	102,196	675,124	2,695,006	8,891,357	2,797,202	9,566,481
United Kingdom.....	70,648,078	96,317,784	11,916,535	34,565,704	82,564,613	130,883,488
United States (including Hawaii).....	25,826,427	123,558,120	27,447,069	101,443,019	53,273,496	225,001,139
Total ²	427,405,724	758,907,136	294,009,743	602,333,932	721,415,467	1,361,241,068
Less reexports to foreign countries.....	11,757,220	20,184,826	-----	-----	11,757,220	20,184,826
Net total.....	415,648,504	738,722,310	294,009,743	602,333,932	709,658,247	1,341,056,242

² In certain years the individual items do not add to the official total as given, but in all cases such discrepancies are relatively insignificant.

TRADING PORTS

There are 69 treaty ports in China in which foreigners are permitted to reside, purchase property, and erect business establishments. In addition there are 11 trade marts voluntarily opened by the Chinese Government to foreign trade, but at which foreigners may reside and lease premises for business or residential purposes. In the voluntarily opened ports, leases to property are restricted to definite periods, in some cases 30 years, whereas in the treaty ports foreigners may lease land in perpetuity. In the special foreign concession areas of some of the treaty ports the leasing of land is in some cases restricted to the nationals of the powers concerned and also for certain prescribed periods. At 47 of the 69 treaty ports the Chinese Maritime Customs maintains offices. These ports are listed in the following tables, which also contain comparative statements of the direct foreign trade of China for each of the ports for the years 1913 and 1923. These tabulations indicate the percentage of each port's trade in the total foreign trade of China for the years 1913 and 1923, and also the percentages of increase or decrease for the two years.

VALUE OF THE DIRECT IMPORTS OF CHINA, BY PORTS, 1913 AND 1923

Ports	1913		1923		1923 trade ¹ compared with 1913 trade
	Value in haikwan taels	Percent- age of total for China	Value in haikwan taels	Percent- age of total for China	
Aigun	290,282	0.0495	108,238	0.0114	<i>Per cent</i> -62
Sansing	47,765	.0082			
Harbin ²	20,172,340	3.4407	9,236,497	.9737	-54
Hunchin	399,969	.0682	1,054,412	.1111	+164
Lungchingsun	671,199	.1145	3,189,154	.3362	+374
Antung ³	6,227,225	1.0621	26,818,200	2.8270	+330
Dairen	28,740,282	4.9020	68,416,348	7.2121	+138
Newchwang	7,930,274	1.3526	11,920,059	1.2565	+50
Chinwangtao	3,562,743	.6077	1,966,761	.2073	-45
Tientsin	51,354,297	8.7592	76,178,355	8.0313	+48
Lungkow			22,251	.0023	
Cheloo	5,211,897	.8889	5,411,298	.5704	+4
Kiaochow	15,466,785	2.6381	32,807,680	3.4584	+112
Chungking	778,435	.1328	671,398	.0708	-14
Wanhsien			16,860	.0018	
Ichang	189,390	.0323	391,322	.0412	+107
Shasi	200,063	.0341	490,111	.0517	+145
Changsha	1,490,357	.2642	1,131,124	.1192	-24
Yochow	6,200	.0011	22,367	.0024	+260
Hankow	34,164,083	5.8272	38,551,704	4.0639	+13
Kiukiang	1,538,984	.2625	3,857,431	.4066	+150
Wuhu	904,186	.1542	1,967,851	.2074	+118
Nanking	2,645,070	.4511	3,845,613	.4054	+45
Chinkiang	3,819,697	.6515	3,646,278	.3844	-4
Shanghai	244,452,421	41.6948	417,870,452	44.0497	+71
Soochow	19,031	.0032	52,096	.0055	+174
Hangchow	558,060	.0952	2,520,488	.2657	+252
Ningpo	2,890,195	.4930	7,064,232	.7447	+144
Wenchow	2,857	.0005	49,525	.0052	+1,633
Santiao	28,607	.0049	66,753	.0070	+133
Foochow	7,735,734	1.3194	7,137,439	.7524	-8
Amoy	10,916,097	1.8619	12,089,623	1.2744	+10
Swatow	20,111,062	3.4502	29,039,744	3.0283	+44
Canton	31,794,219	5.4224	73,846,423	7.7847	+132
Kowloon	29,731,794	5.0712	31,957,886	3.3688	+7
Kowloon (railway traffic)	711,138	.1213	3,148,871	.3319	+343
Lappa	11,850,834	2.0213	18,064,389	1.9042	+52
Kongmoon	6,799,520	1.1597	15,020,954	1.5834	+209
Samshui	5,119,399	.8732	8,098,828	.8537	+58
Wuchow ⁴	10,776,994	1.8381	6,858,678	.7230	-46
Nanning	19,482	.0033	294,693	.0310	+1,412
Kiungchow	3,783,894	.6454	3,914,715	.4127	+3
Pakhoi	1,850,365	.3156	3,475,259	.3663	+88
Lungchow	99,257	.0169	133,971	.0141	+35
Mengtsz	8,644,260	1.4744	13,659,338	1.4399	+58
Szemaio	184,800	.0315	184,054	.0194	+3
Tengyueh	2,401,798	.4097	2,364,697	.2493	+1.5
Total	586,290,431	99.9998	948,633,920	99.9688	+62

¹ In quantity increases in imports during the 10 years the leading ports in order of relative importance are Shanghai, Canton, Dairen, Tientsin, Antung, and Kiaochow (Tsin-tao). Of these six ports Antung showed the greatest percentage of increase and Dairen stood second.

² Harbin's decrease of 10,935,843 taels in imports for the decade is due in part to the falling off in the importations of Russian cotton piece goods through the border port of Manchouli, under the Harbin customs supervision. During 1913 Manchouli's imports of goods via the Trans-Siberian route amounted to 13,312,459 taels, the greater part of which was Russian piece goods. The imports for 1913 for the frontier port of Suifenho, also under the Harbin customs, were valued at 7,884,939 taels. A very considerable falling off in this trade is noted, owing to the interruption of traffic between Suifenho and Vladivostok.

³ Antung's rapid rise in direct import trade may be attributed to the specially favored position which this port occupies in customs duties, as rail-borne goods coming through Chosen (Korea) into China receive a special duty consideration of one-third less than the regular 5 per cent tariff imposition. This special treatment is about the equivalent of the railway freight expenses in transporting cargo from Japan into Manchuria, hence accounts for the rapidly increasing prosperity of the port of Antung.

⁴ Wuchow's trade for 1910 aggregated 10,776,994 taels, and for 1923, 6,858,678 taels. The average annual trade for the 11 years was valued at 8,880,000 taels. The low record in 1923 was due to military disturbances.

VALUE OF DIRECT EXPORTS OF CHINA, BY PORTS, 1913 AND 1923

Ports	1913		1923		1923 trade com- pared with 1913 trade
	Value in haikwan taels	Percent- age of total for China	Value in haikwan taels	Percent- age of total for China	
Aigun.....	1,216,966	0.2828	96,057	0.0127	<i>Per cent</i> -92
Sansing.....	2,445,967	.6065			
Harbin.....	18,565,529	4.6033	33,860,436	4.4972	+82
Hunchun.....	445,193	.1104	478,033	.0635	+7
Lungehingsun.....	174,315	.0432	1,836,271	.2438	+953
Antung ¹	3,746,943	.9296	41,905,652	5.5658	+1,018
Dairen ¹	30,012,606	7.4416	113,906,777	15.1287	+279
Newchwang.....	11,000,993	2.7277	3,928,152	.5217	-64
Chinwangtao.....	1,605,528	.3981	5,997,602	.7966	+273
Tientsin ²	8,140,949	2.0185	49,953,666	6.6347	+514
Lungkow.....			1,462,557	.1942	
Chefoo.....	4,695,539	1.1642	9,154,765	1.2159	+56
Kiaochow.....	12,960,096	3.2135	24,674,467	3.2772	+90
Chungking.....	77,132	.0191	303,217	.0403	+293
Wanhien.....			14,475	.0019	
Ichang.....			2,485	.0003	
Shasi.....	296	.001	283	(?)	-4
Changsha.....	1,072	.0003	19,743	.0026	+1,741
Yochow.....	3,747	.0009			
Hankow.....	16,806,858	4.1673	16,278,195	2.1620	-3
Kiukiang.....	121,283	.0301	23,235	.0031	-81
Wuhu.....	843	.0002	1,957,037	.2599	+113,427
Nanking.....	123	(?)	4,036,887	.5362	+3,281,922
Chinkiang.....	573,685	.1422	285,149	.0379	-50
Shanghai ⁴	176,858,415	43.8522	276,838,233	36.7687	+56
Soochow.....					
Hangechow.....					
Ningpo.....	690	.0002	8,851	.0012	+1,182
Wenchow.....			293,548	.0390	
Santuo.....					
Foochow.....	6,158,639	1.5270	10,880,131	1.4451	+77
Amoy.....	2,533,307	.6281	3,573,050	.4746	+41
Swatow.....	8,282,047	2.0535	12,799,513	1.6999	+54
Canton.....	55,937,841	13.8698	90,228,494	11.9838	+61
Kowloon.....	12,812,500	3.1768	16,712,804	2.2197	+30
Kowloon (railway traffic).....	268,521	.0666	1,908,151	.2534	+610
Lappa.....	5,225,256	1.2956	3,784,567	.5026	-27
Kongmoon.....	1,471,436	.3648	2,697,069	.3582	+83
Samshui.....	812,701	.2015	866,693	.1151	+7
Wuchow.....	3,448,466	.8550	4,198,981	.5577	+22
Nanning.....	2,036,416	.5049	1,062,350	.1411	-47
Kiangchow.....	2,069,262	.5205	3,826,932	.5083	+82
Pakhoi.....	918,091	.2276	2,301,752	.3037	+151
Lungchow.....	10,024	.0025	139,134	.0185	+1,288
Mengtso.....	11,066,270	2.7439	9,042,543	1.2010	-18
Szema.....	39,360	.0097	42,868	.0057	+9
Tengyueh.....	730,277	.1811	1,536,611	.2041	+110
Total.....	403,305,546	100.0000	752,917,416	100.0000	+87

¹ Dairen's increase from 7.4 per cent of China's export trade in 1913 to 15.1 per cent with a total increase of 84,000,000 taels is distinct evidence of enterprise in Manchuria. In this connection it is also worthy of note that Antung, which in 1913 had about 1 per cent of China's export trade, in 1923 enjoyed 5.6 per cent of this trade, with an increase of 38,000,000 taels, or over 1,000 per cent. The specially favored position of Antung in duty treatment, whereby one-third of the export duty is remitted, is accountable for considerable of this advance, otherwise Dairen would probably have taken a large percentage of this trade.

² The fact that Tientsin, which in 1913 enjoyed 2 per cent of China's direct export trade, in 1923 claimed 6.6 per cent of China's exports, with an aggregate increase of 42,000,000 taels, indicates a tendency on the part of the North China ports to enter into direct trade with foreign countries rather than transship these goods through Shanghai. Tientsin's increase in exports for the period under consideration amounted to 514 per cent.

³ Negligible.

⁴ While Shanghai increased its relative position in the import trade of China, in the export trade it enjoyed 7 per cent less of the total trade of China, in spite of the fact that exports from Shanghai increased during the decade by about 100,000,000 taels.

CARRYING TRADE

American tonnage in the direct foreign import trade of China increased from 26,909 ship tons entered in 1913 to 2,100,926 tons entered in 1923, an increase of over 2,000 per cent. In 1913 but 1.85 per cent of the total entered tonnage was American, whereas in 1923 this percentage was increased to 10.22. The proportion of China's import trade carried by American ships in 1913 was one-fourth of 1 per cent, whereas in 1923 it advanced to 7.5 per cent.

The average tonnage for the American entries in 1923 was about 3,000, whereas the average for Japanese ships was 1,750 tons, for British ships 1,400, and for Chinese 1,000 tons. In other words, America does not get full credit for its carrying trade with China, in that a considerable amount of American tonnage disembarked at Hongkong, from which point it was transhipped to ports in China by British, Japanese, and Chinese ships, which received credit in their entered tonnage for this American trade.

The following table shows the net tonnage of steamers entered at Hongkong in 1913 and 1923:

Flags	1913	1923
	<i>Net tons</i>	<i>Net tons</i>
American.....	290, 987	1, 421, 962
British.....	4, 215, 369	5, 572, 944
Japanese.....	1, 907, 307	3, 129, 156
Other.....	2, 460, 143	2, 854, 981
Total.....	8, 873, 806	12, 979, 043

This table shows that nearly 1,500,000 tons of American cargo arrived in Hongkong in 1923, the vast bulk of which was destined to China, but transhipped in other than American ships. No data are available as to the value of the cargo carried by these ships, but it would alter very materially the table of relative values of the import trade of China as carried by ships of different nationalities; hence it is highly necessary in using these figures that qualifications be made in connection with this discrepancy.

Referring to the tonnage entrances for 1923 for the port of Hongkong, it is worthy of note that the average tonnage for the American ships entered was 5,300, for the British ships 2,000, for the Japanese 2,300, and for those of other nations 1,400 tons, which is a further indication of the fact that a larger relative percentage of the American shipping at Hongkong was in transoceanic steamers.

In consulting the table of import shipping it is noted that German shipping decreased in 1923 from the figures for 1913 by 73 per cent for tonnage and 55 per cent in value of cargo carried. It is anticipated, however, that during the next decade German shipping will have regained its former position.

The following table shows the share taken by each nationality in the import trade of China in 1913 and in 1923, also the value of the foreign imports from these nations in the years mentioned and the relation of such trade to China's total import trade:

Flags ¹	1913		1923		
	Tonnage of entries	Per cent of total tonnage	Tonnage of entries	Per cent of total tonnage	Per cent increase or decrease
American ²	269,091	1.85	2,100,926	10.22	+680
British.....	5,127,578	35.32	7,259,706	35.31	+41.5
Danish.....	43,338	.29	140,196	.68	+200.4
Dutch.....	161,779	1.04	507,118	2.42	+213.5
French.....	469,450	3.23	600,212	2.91	+28
German.....	1,405,086	9.68	377,236	1.83	-73
Italian.....	.....	.....	53,944	.40	.....
Japanese.....	3,882,664	26.74	6,596,025	32.08	+70
Norwegian.....	167,196	1.15	200,729	.97	+20
Portuguese.....	63,451	.44	177,266	.86	+179
Russian.....	422,274	2.91	59,497	.29	-86
Spanish.....	.....	.....	12,007	.06	.....
Swedish.....	34,344	.23	55,617	.27	+62
Nontreaty powers.....	135,167	.93	141,220	.69	+4
Chinese.....	2,336,806	16.09	2,247,366	10.93	-3.8
Total.....	14,518,224	100.00	20,559,065	100.00	+41.6

Flags ¹	1913		1923		
	Value of import trade	Per cent of total imports	Value of import trade	Per cent of total imports	Per cent increase or decrease
American ²	<i>Haikwan taels</i> ³ 3,076,644	0.25	<i>Haikwan taels</i> ³ 70,852,240	7.47	+2,202.9
British.....	270,429,460	46.12	371,448,317	38.11	+33.25
Danish.....	1,107,621	.17	5,661,328	.60	+402.1
Dutch.....	6,661,282	1.14	17,028,378	1.79	+155.6
French.....	20,599,159	3.51	28,423,281	2.99	+38
German.....	47,353,265	8.09	21,300,543	2.24	-55
Italian.....	.....	.....	2,600,905	.27	.....
Japanese.....	136,486,197	23.28	291,854,807	30.77	+113.85
Norwegian.....	4,276,353	.73	11,545,455	1.21	+176
Portuguese.....	19,213	.003	2,161,525	.23	+11,150
Russian.....	21,064,826	3.59	8,977,407	.94	-57.4
Spanish.....	.....	.....	45,827	.005	.....
Swedish.....	983,075	.17	1,879,862	.19	+91
Nontreaty powers.....	6,979,491	1.19	7,387,700	.78	+5.8
Chinese.....	67,253,845	11.47	107,436,255	11.325	+60
Total.....	586,290,431	100.00	948,633,920	100.00	+62

¹ Austria became a nontreaty power after the World War; Chili did not enter into the foreign import trade of China until a commercial treaty was signed in 1922; Polish and Spanish flags made their first appearances in China's carrying trade in 1923; German flags reappeared after the war in 1921.

² By way of comparison, it is of interest to note that the American tonnage in China's trade in 1882 was 167,801 and in 1891, 67,000 tons.

³ The exchange value of the haikwan tael of 1913 is quoted by the Customs as \$0.73 and for 1923, \$0.80 United States gold.

Although it has not been considered necessary to reproduce a tabulation for the clearances of steamers from China in the export carrying trade, because the actual amount of tonnage is not very different, yet it is of interest to know that the American position for the period 1913-1923 in the export trade is relatively similar to that in the import trade. American ships are credited with taking from China during 1923 exports valued at 32,000,000 taels. Here, again, is a very considerable discrepancy, due to the fact that silk exports taken from Hongkong by American ships, which represent cargo that originated in Hongkong, probably exceeded in value the

aggregate amount credited to China in the export trade. America's acknowledged tonnage for Hongkong was almost equal to the clearances from China, and it is known that the ships carried heavy and valuable cargoes.

SHIPPING

The fact that Shanghai and Hongkong have been placed in the same category with the ports of New York and London in shipping tonnage, and presumably in relative importance in the world's shipping trade, warrants an analysis of China's shipping situation.

The fact that China has poor internal rail communications—the most inadequate in the world for its size and population—causes a much higher development of domestic water transportation than would obtain otherwise.

It is the practice of the Chinese Maritime Customs to accredit to each port the actual registered tonnage of the steamers entering and clearing that port, irrespective of the frequency of the calls or the actual amounts of cargo discharged or loaded. Thus, in the table appearing in this section it is seen that the river ports Chinkiang, Nanking, Wuhu, and Kiukiang are each accredited with about 9,000,000 tons of shipping for the year 1923. Although less important commercially than Hankow, still they have on the average a credit of about 2,000,000 in tonnage per year more than enters and clears the port of Hankow. Hankow's total trade for 1923 is given as 240,000,000 taels, whereas that for each of the three ports, Chinkiang, Nanking, and Wuhu, for the same period is less than 40,000,000 taels. A similar situation obtains with the coasting trade. Chefoo is credited with a tonnage of 3,000,000, which is not much less than that credited to Tientsin, whose actual trade is four times as great. Similarly, the coasting trade of Ningpo, Foochow, Amoy, and Swatow, because of the frequent calls of coasting steamers on regular schedules, receives far more tonnage credit than the trade entitles them to.

It is interesting to note also that in tonnage of ocean steamers, the customs tabulations give the coast trade ocean status, apparently reserving to the river trade domestic or nonocean status. Thus Shanghai's 30,000,000 tons of shipping contains about 18,000,000 tons of entries and clearances representing river and coast trade, the actual cargo tonnage of which would on this account be considerably less. In a somewhat similar way, Hongkong is credited with 35,000,000 tons entered and cleared in foreign trade for 1923. As Hongkong is located on Victoria Island off the coast of South China, all contact between Hongkong and China is necessarily by water, hence a very considerable amount of transit trade between Canton and other sections of China passes through Hongkong and is credited to the shipping returns of Hongkong's foreign trade. Canton's total tonnage for 1923 was given as 6,600,000. As the port of Canton has not been developed for direct ocean shipping except as it concerns coast port trade, the bulk of this tonnage also passes through Hongkong, either on coasting steamers or in transit at Hongkong. Similarly, the regular coast lines running from Swatow, Foochow, and Amoy also make Hongkong a port of call. Thus the table of tonnage of vessels entered and cleared at each port of China and at Hongkong must be taken with the reservations herein mentioned.

It is, however, noteworthy that the tonnage of vessels which entered and cleared Chinese ports increased from a total of 6,600,000 tons in 1864 to 18,800,000 in 1881, 30,000,000 in 1894, 64,000,000 in 1904, and nearly 100,000,000 tons in 1924.

The following table shows the tonnage of vessels entered and cleared at each open port of China in 1923.

Ports	Total shipping	Tonnage of ocean steamers	Percent- age of shipping borne by ocean steamers	Ports	Total shipping	Tonnage of ocean steamers	Percent- age of shipping borne by ocean steamers
	<i>Tons</i>	<i>Tons</i>	<i>Per cent</i>		<i>Tons</i>	<i>Tons</i>	<i>Per cent</i>
Aigun.....	229,588	.....	.....	Shanghai.....	30,018,240	24,726,143	82
Harbin.....	757,440	.....	.....	Soochow.....	186,249	.....	.....
Antung.....	534,506	521,820	97.6	Hangchow.....	234,289	.....	.....
Dairen.....	9,042,927	9,034,351	99.9	Ningpo.....	2,329,981	2,313,727	99.3
Newchwang.....	1,107,090	1,107,090	100	Wenchow.....	250,098	202,947	81
Chinwangtao.....	2,651,654	2,651,654	100	Santao.....	77,644	76,176	98
Tientsin.....	3,853,831	3,853,831	100	Foochow.....	1,483,442	1,480,880	93
Lungkow.....	104,736	104,736	100	Amoy.....	3,136,384	3,136,384	100
Chefoo.....	3,271,065	3,270,227	99.97	Swatow.....	4,660,662	4,660,662	100
Kiaochow.....	3,393,521	3,392,069	99.95	Canton.....	6,569,457	2,899,833	44
Chungking.....	269,330	.....	.....	Kowloon.....	2,032,328	.....	.....
Wansien.....	443,665	.....	.....	Lappa.....	764,707	.....	.....
Ichang.....	1,006,861	.....	.....	Kongmoon.....	1,191,206	.....	.....
Shasi.....	1,324,054	.....	.....	Samshui.....	1,395,930	.....	.....
Changsha.....	542,990	.....	.....	Wuchow.....	611,001	.....	.....
Yochow.....	2,274,514	.....	.....	Nanning.....	28,145	.....	.....
Hankow.....	7,463,701	1,052,652	14	Kuuechow.....	1,156,586	1,156,586	100
Kiukiang.....	8,817,094	102,702	1	Fakhoi.....	437,058	437,058	100
Wuhu.....	9,693,297	637,504	6	Lungchow.....	1,952	.....	.....
Nanking.....	9,347,886	443,572	5	Mengtsz.....	1,124	.....	.....
Chinkiang.....	9,075,558	547,281	6				

NOTE.—The total tonnage of ocean steamers entered and cleared at the open ports of China during 1923 represents 51 per cent of the total shipping of China. The above figures do not include tonnage of vessels entered and cleared under the Inland Steamer Navigation Rules of the Chinese Maritime Customs nor junks entered and cleared at the Chinese Native Customs. Total tonnage of ocean steamers entered and cleared at the ports of China in 1921 was reported at 53,135,726.

Of interest to American business are the steamers especially constructed to ply in the upper Yangtze trade over the rapids. There are in this trade at present 40 steamers, of which 10 are American and 9 British. It is anticipated that 15 new steamers will be added to the upper Yangtze trade during 1925, 3 or 4 of which will be under the American flag.

The method of assessing tonnage dues in China militates against oversea shipping and encourages transshipments at non-Chinese ports. In other words, it discourages steamers which ply between European or American ports and the Far East from making Chinese trading ports ports of call, as tonnage dues are assessed on a quarterly rather than on a trip basis. Coasting and river steamers are favored in this manner over steamers calling but once or twice during a quarter, as the latter pay as much per ton for one or two entries in three months as is paid by steamers which can make numerous entries during the same period on one assessment.

IMPORT TRADE OF CHINA

By Trade Commissioner George C. Howard

The Chinese Maritime Customs in their annual Report and Abstract of Statistics divide the import trade into 12 grand groups which are quoted in the following table, with comparative figures for the calendar years of 1913 and 1923:

Imports	1923			1913		
	Value in haikwan taels	Per cent of total	Order of importance	Value in haikwan taels	Per cent of total	Order of importance
Cotton goods (except yarn).....	131,886,293	14.3	1	111,358,934	19.5	1
Rice.....	98,198,591	10.6	2	18,383,719	3.2	6
Kerosene.....	58,291,716	6.3	3	25,408,845	4.5	5
Raw cotton.....	53,816,201	5.8	4	2,984,022	.5	16
Sugar.....	51,997,721	5.6	5	36,463,491	6.4	3
Metals and minerals.....	44,938,111	4.9	6	29,156,086	5.1	4
Cotton yarn.....	41,633,818	4.5	7	71,060,089	12.5	2
Cigarettes.....	28,272,615	3.1	8	12,589,300	2.2	8
Flour.....	27,232,615	2.9	9	10,300,612	1.8	9
Machinery.....	26,677,796	2.9	10	7,137,048	1.3	13
Fish and fishery products.....	25,081,819	2.7	11	12,974,540	2.3	7
Woolen goods.....	19,042,413	2.1	12	4,879,281	1.9	14
Paper.....	16,626,519	1.8	13	7,169,255	1.3	12
Coal.....	12,860,605	1.4	14	9,420,758	1.7	11
Tobacco.....	12,777,016	1.4	15	3,572,560	.6	15
Artificial indigo.....	11,816,918	1.3	16	9,633,157	1.7	10
Unclassified and miscellaneous.....	262,251,787	28.4	-----	197,670,860	34.7	-----
Total net imports.....	923,402,554	-----	-----	570,162,557	-----	-----

The above table will indicate both the growth in the value of the total trade and the changed importance of the various groups during the years from 1913 to 1923.

RELATIVE POSITION OF COUNTRIES

According to the Abstract of Statistics, the relative position of the various countries as suppliers of China's imports were, in 1913 and 1923, as shown in the following table:

Direct imports	1923		1913	
	Value in haikwan taels	Per cent	Value in haikwan taels	Per cent
Hongkong.....	248,083,456	26.15	171,636,099	29.27
Japan.....	211,024,297	22.25	119,346,662	20.36
United States.....	154,417,451	16.28	35,427,198	6.04
Great Britain.....	120,397,229	12.69	96,910,944	16.53
British India.....	55,240,982	5.82	48,292,190	8.24
Germany.....	32,456,067	3.42	28,302,403	4.83
French Indo-China.....	18,438,662	1.94	-----	-----
Netherlands Indies.....	13,600,326	1.43	6,836,792	1.17
Chosen.....	11,954,940	1.26	-----	-----
Belgium.....	10,878,750	1.15	15,830,838	2.70
Canada.....	10,327,374	1.09	-----	-----
Russia and Siberia.....	10,202,819	1.08	22,152,888	3.78
Straits Settlements.....	9,213,722	.97	8,935,416	1.52
Macao.....	-----	-----	6,596,148	1.12
Other.....	42,367,645	4.47	26,022,853	4.4

Value of haikwan tael in 1923, \$0.80; in 1913, \$0.73.

It will be noticed that in both 1913 and 1923 Hongkong is shown as having the greatest single share of the import trade. As Hongkong's exports to China are practically all transshipped goods from other countries, the difficulty of giving a clear and accurate statement as to the origin of imports will be readily appreciated. Any attempt to determine the origin of Hongkong's exports to China is frustrated by the fact that none of the export statistics issued by Hongkong retain the identity of the commodities by country of origin.

Therefore the reader should keep in mind the discrepancies arising from the Hongkong and also Canadian and Japanese figures, as a very considerable portion of China's imports from the United States come through those countries and in Chinese Maritime Customs figures are credited to them instead of to the United States.

A review of the place of the United States in the import trade of China in 1923 reveals the fact that 93.3 per cent of the total share of the United States is made up of 20 items. They are listed in the following table, which also gives the percentage supplied by the United States of the total imports of each item from all sources, and the value in per cent of each item in relation to total imports from the United States:

Imports from United States	Value in hankwan taels	Per cent of total imports from United States	Per cent of total gross im- ports into China from all sources
Kerosene.....	48,776,000	33.8	71.5
Paraffin wax.....	1,745,000	1.2	42.4
Gasoline, benzine, naphtha, and petrol.....	1,344,000	.9	34.6
Liquid fuel.....	1,237,000	.9	55.3
Lubricating oil.....	2,530,000	1.8	74.7
Cigarettes.....	20,752,000	14.4	72.8
Tobacco.....	10,545,000	7.3	80.2
Flour.....	16,369,000	11.4	60.1
Wheat.....	6,936,000	4.8	76.3
Metals and minerals.....	10,681,000	7.4	23.2
Machinery.....	4,449,000	3.1	16.0
Dyes, colors, paints.....	3,991,000	2.8	14.9
Raw cotton.....	3,389,000	2.4	6.2
Timber, softwood.....	2,822,000	2.0	53.7
Tinfoil and other foils.....	1,852,000	1.3	69.9
Paper.....	1,803,000	1.2	10.7
Motor cars.....	1,384,000	1.0	55.3
Electrical materials and fittings.....	1,322,000	.9	15.6
Household stores.....	1,171,000	.8	26.4
Condensed milk.....	1,047,000	.7	52.2
Total.....	144,145,000		

An examination of these figures brings out strongly the fact that commodities comprising the largest individual items of this trade are those handled by specialized organizations rather than by general import and export houses.

Some outstanding examples of this in connection with American products are kerosene and other mineral-oil products, 85 per cent of which business is in the hands of two firms; cigarettes and tobacco, largely controlled by one or two concerns; timber, handled to the extent of 78 per cent by five firms; condensed milk, some 90 per cent

of which is done by two firms; machinery, a large percentage by four houses.

From these and similar examples it is patent that, provided a commodity lends itself to wide use in China, the most effective method for securing thorough marketing is by establishing an organization in China to handle it.

This method, however, is one which is followed only in exceptional cases, and then only after the market has been subjected to long and painstaking study from every angle, with particular reference to the commodity in question.

For fuller statistics regarding China's imports and exports see section headed "Résumé of the Trade of China."

FINANCING OF IMPORTS

There are numerous methods by which China's imports are financed, and while there is a great amount of detailed information on this important subject, space does not permit of any broad discussion here. We are therefore reproducing here, with his permission, a short treatise on the subject written recently by Mr. E. Kann, manager of the Chinese-American Bank of Commerce in Shanghai:

A small portion of China's imports is financed by collection drafts, which means that the exporter will obtain his money (eventually, plus interest) after advice from China has been received saying that the drafts have been duly paid. A larger portion of imports into China is financed by telegraphic transfer. This means that the goods are shipped free to that country and that the proceeds of sale are transferred by cable to the shipper (or his order) after having been realized.

The bulk of China's imports are financed by means of credits opened by the importer in favor of the exporter. This signifies shifting the burden of financing an oversea transaction from exporter to importer.

It is remarkable how little exporters really know of the legal aspects of the various forms of credits. The following is merely an attempt to define briefly the various forms of credits employed by importers in China:

I. Authority to purchase (A/P).

- (a) Revocable and with recourse to drawer.
- (b) Irrevocable and with recourse to drawer.
- (c) Revocable, but without recourse to drawer.

II. Confirmed credits.

- (d) Confirmed by issuing bank, but not by notifying bank.
- (e) Confirmed by issuing bank and also by notifier.
- (f) Confirmed and without recourse to drawer.
- (g) Confirmed and irrevocable.

III. Acceptance credits.

AUTHORITY TO PURCHASE

The authority to purchase is employed largely for financing imports into China from foreign countries. The authority is issued by a bank in China upon the written request of an importer of approved standing. It is for a specified amount, for clearly specified goods, to be shipped within a clearly stipulated period. A full set of shipping documents accompanies the draft, drawn either at sight or at usance up to six months after sight; usually 90 or 120 days after sight.

The typical characteristics of the A/P referred to under (a) are:

(a) The notifying bank abroad acts merely as agent of the bank in China and is at liberty to cancel the authority to draw, if the bank in China does not provide in due time the funds which are needed for negotiating the drafts. This right is clearly visible from the manner in which the authority to draw is advised:

"DEAR SIRS: We beg to inform you that we are in receipt of instructions from the ----- Bank in Shanghai, authorizing us on behalf of ----- to negotiate your documentary drafts, if tendered before the ----- for \$10,000, drawn at 90 days after sight, etc., etc."

(b) The issuing bank reserves for itself the right to cancel the credit, or its unused balance, at any time, without previous notice to the exporter or without the consent of the importer.

(c) The drawer (exporter) is responsible to the issuing bank in China for payment of the draft on due date, should the drawee (importer) fail to meet his obligation. This obligation is clearly impressed on the exporter in the original advice to him, which ends up in the words:

"Please note that this is not to be considered as being a bank credit and does not relieve the drawer from the liability attaching to the drawer of a bill of exchange."

Although these conditions seem to be severe, they are accepted for financing the bulk of British and Continental trade with China. America exacts more severe terms, usually confirmed credits.

The next variety of the A/P is the one mentioned under (b) irrevocable and with recourse. Such authorities are required for financing goods which have to be manufactured specially (machinery, cotton or woolen cloth with particular patterns), or goods which have to be collected in lots. The drawer remains responsible until the draft has been paid, but the issuing bank has not the right to cancel the A/P before the date of its original expiry.

The third kind of A/P, revocable, but without recourse to drawer, mentioned under (c), means that the authority to draw may be canceled during its life, but once the drafts have been negotiated the drawer (shipper) is no more responsible, should acceptance or payment of the draft be refused. The issuing bank has recourse only against the drawee (importer) and is secured by the goods.

Some writers speak of a fourth kind of A/P, namely, irrevocable and without recourse to drawer. In reality this would be a confirmed credit par excellence, and not an authority to purchase.

CONFIRMED CREDITS

The confirmed credit, as classified under (d), means a definite engagement on the part of the issuing bank either to negotiate drafts under clearly stipulated conditions or to honor drafts drawn by the beneficiary. This shows that the issuing bank is liable to the shipper for the fulfillment of its engagements, but not the notifying bank.

The class of confirmed credit specified under (e) differs from the foregoing, because both the issuer and the notifier remain liable to the exporter. This is the real "confirmed" letter of credit, while (d) is often styled (though not correctly) "unconfirmed."

Under (f) we have the "confirmed and without recourse to drawer" credit. A remarkably large percentage of exporters do not know much about the variations in the sundry classes of credits just described. It is generally taken for granted that every "confirmed" credit is "without recourse to drawer." This is not the case. According to law the drawer under a confirmed letter of credit is liable until the draft has been accepted by the drawee. Then his responsibility ceases, and the holder of his draft has no more recourse on the drawer, should the acceptor fail to pay on due date. Only if the credit is "confirmed and without recourse" is there no more obligation on the part of the drawer, once he has handed in his draft and the documents.

The next class, (g), treats "confirmed and irrevocable" credits. Irrevocable means, as already previously stated, that the credit can not be canceled prior to the expiration date without the consent of the beneficiary. In theory a "confirmed" credit is liable to be canceled; in practice this is rarely or never done. The term "irrevocable" does not absolve the drawer from liability until the draft has been accepted.

It happens frequently that exporters to China demand that an "irrevocable" credit should be established in their favor. They take it for granted that the term "irrevocable" includes the attributes "confirmed and without recourse." This is by no means the case. Unless distinctly advised the exporter must take the term "irrevocable" to be binding only on the issuing but not on the advising bank.

The ideal credit for the exporter is the "confirmed—irrevocable—without recourse" credit.

The acceptance credit method of financing imports into China has, up to the present, been employed in London only. It differs in many respects from the methods of opening either A/P or confirmed credits; principally because no drafts are sent to China and because there is no interest to be paid there.

This class of credit will be used only if discount rates are low, say, not above $3\frac{1}{2}$ per cent; otherwise it would be unremunerative to use acceptance credits.

The procedure is as follows: At the request of the importer in China, a bank there opens an acceptance credit with a London bank for a certain amount, to be availed of by the exporter within a certain time, and against shipment to China of a certain class of goods.

Instead of drawing on the importer in China, the shipper in London will draw on a London bank (as authorized) at 60 to 120 days after sight. The London bank accepts the draft and hands it back to the exporter, from whom it had simultaneously obtained the complete set of shipping documents; these are forwarded to the issuing bank in China.

The exporter will discount in the open market the draft accepted by the London bank, if he is in need of funds. Otherwise he will hold the draft until the moment when it will suit him to turn the acceptance into money.

The cost of such a transaction is the commission charge, which varies, but which averages $\frac{1}{8}$ per cent per month.

If the market rate for 120-day prime banker's acceptances is 3 per cent, for instance, and the acceptance commission $\frac{1}{8}$ per cent per mensem, the total interest cost will be $4\frac{1}{2}$ per cent per annum, compared with 6 per cent payable under A/P or confirmed credits. Financing imports into China under acceptance credits does not involve disbursement of moneys on the part of any one of the parties directly involved in the transaction. The accepting bank merely lends its credit. All it demands is its commission and the remittance of cover from China on due date of the draft.

The issuing bank has no outlay of funds, but its risk is somewhat larger, seeing that there is no drawer, and consequently no recourse on drawer.

Its profit consists of a share in the acceptance commission and in profits when fixing the rate of exchange.

HANDLING SHIPPING DOCUMENTS

These are the principal features of credits as used by importers in China. There are many particulars connected with the problem, which can not be discussed here for lack of space.

Yet it is deemed expedient to include some remarks on local custom regarding the handling of shipping documents attached to the drafts negotiated under credits opened by China banks. If goods are shipped to China under "confirmed" credit or under "A/P without recourse to drawer," the shipper is in no way concerned as to how the shipping documents are handled in China; this is an arrangement entirely between the drawee and the bank in China.

If, however, goods are shipped to China in terms of an "Authority to purchase," the exporter, remaining liable as drawer until payment of the draft, is closely concerned with the handling of the documents.

Depending on the consent of the issuing bank in China and on the agreement of both exporter and importer, it is to be stipulated whether drafts are to be drawn with documents deliverable on acceptance (D/A) or on payment (D/P). If nothing is said on the face of the draft it is understood that documents are D/P. Sometimes the bank in China will give up the goods to the importer against the latter's trust receipt. Unless the bank has the distinct consent in writing from the drawer, it loses all recourse against the latter, in case the acceptor (importer) fails to meet his obligations on due date.

It is customary in China to deliver shipments in case (bales, barrels, bags, etc.) lots. Say an exporter has made a shipment of 25 cases of woolen cloth to China and drawn at 90 days after sight, under an A/P, \$6,000 (United States) on the importer in Shanghai. The importer may take delivery of case lots before due date by paying to the bank the corresponding sums as part payments of the face amount of the draft. This way of procedure may not suit the exporter, especially because the importer has the choice of picking out the current articles, and leaving the goods with a narrow market unsold and the corresponding amount of the draft unpaid.

In case of a law suit, the case would probably be decided against plaintiff on the ground of established commercial custom in China. Very few exporters abroad are fully aware of these conditions, the existence of which has proved to be a necessity involving infinitesimal risks for the exporter. Should the

latter, however, not agree to the procedure described, he would have to give instructions to that effect, or have the draft marked "Part deliveries not permitted."

CHEMICALS

The absence of detailed statistics renders practically impossible the compilation of comprehensive data on China's chemical imports.

Maritime Customs statistics give but seven headings to cover chemicals, including medicines. These are given in the following table, with comparative figures for 1913 and 1923, all principal countries of supply being shown (values in thousands of haikwan taels):

Chemicals	Total		Great Britain		United States		Hongkong		Japan		Germany		France	
	1913	1923	1913	1923	1913	1923	1913	1923	1913	1923	1913	1923	1913	1923
Soda.....	1,133	3,317	914	2,010	4	196	43	385	22	597	6	99	---	91
Soap and soap-making materials ¹	---	2,896	---	394	---	99	---	603	---	1,210	---	58	---	310
Saltpeter.....	415	151	---	---	---	---	332	132	5	6	78	11	---	---
Match-making materials.....	496	2,289	58	3	3	---	76	487	331	1,306	10	417	---	27
Chemical products.....	494	3,386	77	336	40	239	27	492	172	1,428	91	387	9	28
Glycerin.....	136	170	22	54	---	43	---	5	2	19	109	3	---	7
Medicines.....	4,117	7,929	469	1,093	66	790	2,393	3,134	748	1,111	100	563	26	312
Total.....	6,791	20,138	1,542	3,920	113	1,387	2,873	5,238	1,280	5,677	394	1,538	35	775

¹ New heading since 1913.

NOTE.—Value of haikwan tael, 1913, \$0.73; 1923, \$0.80.

As Hongkong supplied 26 per cent of China's total chemical imports during 1923, details of Hongkong's imports from various sources during that year are shown in the following table (values in pounds sterling):

Chemicals	United Kingdom	Japan	United States	Germany	Netherlands East Indies	India	All others	Total
Acid:								
Carbolic.....	26	---	---	---	---	---	---	26
Hydrochloric.....	---	4,377	---	---	---	---	---	4,377
Nitric.....	---	6,088	---	---	---	---	---	6,267
Sulphuric.....	---	9,516	---	---	---	---	---	10,313
Other.....	2,365	107	252	---	---	---	---	2,943
Bleaching powder.....	---	7,591	---	---	---	---	---	11,115
Borax.....	6,082	---	---	---	---	5,310	---	11,947
Calcium carbide.....	---	3,202	3,584	---	---	---	---	8,777
Glycerins.....	14,327	---	---	---	---	---	---	14,327
Phosphorus.....	---	---	---	10,788	---	---	---	12,554
Potash, chloride of.....	---	---	---	22,897	---	---	---	24,111
Quinine.....	643	---	---	---	745	---	---	1,427
Saltpeter.....	---	---	---	---	---	37,198	---	37,198
Soda ash.....	31,678	---	---	---	---	---	---	35,534
Soda:								
Carbonate.....	---	62	---	---	---	---	---	69
Caustic.....	12,769	---	3,011	---	---	---	---	17,172
Sulphur.....	---	4,882	---	---	---	---	---	4,995
Other chemicals and drugs.....	37,355	29,474	15,689	6,713	---	---	---	117,417
Soda, silicate of.....	3,190	---	---	---	---	---	---	3,697
Alcohol.....	---	---	---	---	82,245	---	---	84,685
Manures (chemical and mineral).....	259,712	60,481	241,169	10,264	---	---	---	614,265
Match-making materials.....	---	118,310	---	---	---	---	---	123,394
Photographic chemicals.....	1,267	---	---	438	---	---	---	1,977
Total.....	369,474	244,090	263,705	51,100	82,990	42,508	92,721	1,146,588

UTILIZATION IN INDUSTRY

There is no organized chemical manufacturing industry in China. There are a few factories scattered throughout the country for the manufacture of sulphuric acid, lactic acid, glycerin, soda ash, caustic soda, nitric acid, saltpeter, and a few miscellaneous chemicals, but owing to the lack of statistics regarding output it is impossible to give any idea of the quantities which China produces. As China's manufacturing industry progresses, more attention is being given to the manufacture of chemicals needed in the country's various industries. The chief drawbacks to rapid expansion are expenses of obtaining necessary raw materials, the moderate demand, and the absence of a well-defined market for by-products. Therefore, the great proportion of China's entire requirement of chemicals is imported.

China has a well-developed match-making industry, there being nearly 100 factories operating which have an estimated total output valued at about \$6,000,000 gold per year. These factories use potassium chlorate, red phosphorus, potassium permanganate, and nitrate of lead.

China's soap factories, which number in the neighborhood of 100, scattered throughout the country, use glycerin, sodium hydroxide, soda ash, rosin, and soap yellow.

There are probably 50 good-sized egg-products factories in China which preserve eggs either by drying or freezing. In these factories there is a demand for ammonia and boric acid.

In the cotton and spinning mills where mercerization is done, caustic soda and sulphuric acid are used.

Glass factories use a small quantity of sodium carbonate, red lead, sodium nitrate, and arsenic.

Ammonia.—Because of the comparatively small number of ice factories in China, imports of ammonia are still small. The anhydrous ammonia is imported principally in steel cylinders and the market is controlled by a large German firm. American manufacturers of this chemical have made repeated efforts to enter the Chinese market but so far have been unsuccessful in meeting German competition.

Ammonium sulphate.—Although chemical fertilizer is passing out of the experimental stage in China and is being used to an increasing extent in South China, imports of ammonium sulphate are still very small. Manufacturers of various chemical fertilizers are doing good missionary work, and the use of these fertilizers, while expected to be slow of expansion, should become more general.

Calcium carbide.—This product is used chiefly in the manufacture of gas for acetylene lamps and has not yet developed a very large trade.

Saltpeter.—The Chinese produce a rather inferior quality of saltpeter, but it serves their purposes sufficiently well to supply the fire-works industry. Some imported saltpeter is being used as fertilizer, and Government arsenals use it in the manufacture of explosives.

Bichromate of potash and bichromate of soda.—These chemicals are used in tanning.

Hyposulphite of soda.—Confined largely to photographic purposes.

Potassium bichromate.—Used in tanneries in the manufacture of sole leather.

Borax.—Used mainly in the manufacture of white brass.

Bicarbonate of soda.—Used for manufacturing soda water and medicine.

Bleaching powder.—Used in paper manufacturing, in textile bleaching, and as a disinfectant.

Ammonia carbonate.—Used mostly in biscuit manufacturing.

Industrial chemicals are sold in China principally by import houses on an indent basis, and only the items for which there is a large and steady demand are stocked. These include soda ash, caustic soda, bicarbonate of soda, bleaching powders, boric acid, glycerin, oxalic acid, etc. There are possibly half a dozen houses in China which carry stock of chemicals, these firms in the main being British. One large British firm, which practically controls the trade in soda and various other items enumerated above, has an extremely well-organized business and carries stocks in the principal parts of China.

Medicines.—In the preceding table the largest single item sold is that of medicines, which, in 1924, reached a figure of approximately 8,000,000 haikwan taels.

There are two distinct markets in China, a very limited one among the foreign population and the wealthier Chinese living in treaty ports, who, unlike the vast majority of the population, use foreign drugs to a considerable extent, and an enormous market among the whole population of China (estimated in the neighborhood of 400,000,000).

It is a simple matter to sell to the foreign market, methods being little different from those pursued at home. For this portion of the population attractive window displays, advertising in the foreign and native language press, well-known foreign trade-marks, reasonable price, and good quality will do as much to secure trade as they will in the United States.

The enormous market among the rest of the population in China must be approached in an entirely different way. It must be remembered that in addition to having an extremely limited purchasing power and being (according to recent estimate, including the entire country) 90 per cent illiterate, this market is composed of people who have a pharmacy probably different from any other in the world, which has been evolved through hundreds of years. In addition to this, superstition plays no little part in their ideas of medicine.

In connection with the above import figures it is necessary to point out that the customs valuation of drugs imported represent but a fraction of their retail sales value. In the case of a certain item, imports are made in case lots, and the value per unit appearing in the customs returns is in the neighborhood of 10 cents (silver), while the retail price is \$1 (silver) for the same unit. This ratio does not apply to all drugs, but it is an indication.

During the past few years there has been in many places a rapid drawing away from the old-style drug shop to the more modern type of dispensary, where both imported and native medicinal preparations, as well as toilet articles and other goods, are carried. In one

city it is stated on good authority, 15 more or less modern Chinese dispensaries now exist where 10 years ago there were two old-type drug shops.

It must, however, be understood that owing to prevailing conditions it is an extremely slow market in which to introduce new products, but because of the same conservatism which makes the Chinese slow to adopt new things, it is an extremely loyal market when a product has once been properly introduced and the trade-mark or chop becomes well known.

From this brief statement it is clear that in order to reach the native market a thorough knowledge of that market is essential. Primarily there must be a demand for the product which is to be sold, or a good reason to believe that such a market can be created. Price must be within reach of a population whose purchasing power is extremely low, and in this price must be included a fair margin of profit for importer, dealer, and retailer.

In case of a company establishing their own house here, it must be borne in mind that the initial cost of doing business in China—particularly the introducing of new products on the native market—is high, and that results are extremely slow to obtain.

Advertising and distribution facilities are probably the next essential features to consider, and it is our opinion that the advertising should be handled by some one who is thoroughly conversant with proper advertising methods, as there are innumerable factors entering into effective advertising in China which one without experience in the market can not properly handle. An advertisement which would carry an excellent appeal in other countries might be useless or possibly harmful in China on account of many factors, among which are such things as improper translation, incorrect color on posters or calendars, and nonconformity with the ideas and customs of a particular section of the country in which advertising is done.

The appointing of able and reliable dealers is a matter which is of prime importance and one which requires a thorough familiarity with the market.

Credit as it exists in the United States and methods of determining the credit worth of a native firm are practically nonexistent in China, and a familiarity with the native methods of doing business is therefore most essential.

INDIGO, DYES, AND COLORS

The interest of American manufacturers in China as a market for dyes is of very recent origin. The quantities and values of dye imports from the United States for the years 1913, 1919, 1920, 1921, and 1923 are shown in the following table:

Item	1913		1919		1920	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Mangrove bark.....					150	275
Aniline dyes.....		656		1,667,691		2,050,956
Artificial indigo.....			1,766	741,365	4,845	4,470,482
Vermilion.....	15	511			16	960
Dyes and colors (unclassified).....	237	2,049	2,376	87,326	2,193	135,707
Total value.....		3,246		2,096,382		6,658,380

Item	1921		1922		1923	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Aniline dyes.....		684,249		181,454		354,663
Artificial indigo.....	25,108	2,617,177	16,029	958,434	90,158	3,185,029
Vermilion.....	23	1,373				
Dyes and colors (unclassified).....	941	76,565	326	33,633	2,532	54,515
Total value.....		3,379,364		1,173,521		3,594,207

NOTE.—The value of the haikwan tael in 1913 was \$0.73 gold; in 1919, \$1.39; in 1920, \$1.24; in 1921, \$0.76; in 1922, \$0.83; and in 1923, \$0.80. One picul equals 133½ pounds.

The quantities and values of dye imports from all sources for the years 1913, 1919, 1920, 1921, and 1923 are given in the following table:

Item	1913		1919		1920	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Mangrove bark.....	107,725	174,602	177,608	351,721	117,820	238,474
Cinnabar.....	1,714	130,195	1,864	267,189	1,825	178,128
Sapanwood.....	23,891	51,592	80,800	224,065	69,017	231,614
Aniline dyes.....		5,401,820		3,042,917		7,730,291
Artificial indigo.....	319,575	9,633,157	18,795	1,312,269	155,641	15,306,474
Vegetable indigo.....	12,620	56,939	87,699	637,116	58,467	470,520
Vermilion.....	5,749	243,533	2,647	256,207	4,008	269,658
Dyes and colors (unclassified).....	135,649	956,500	131,143	1,247,200	138,013	1,427,868
Total value.....		16,648,338		7,338,684		25,853,027

Item	1921		1922		1923	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Mangrove bark.....	190,885	432,223	244,415	563,071	196,400	526,487
Cinnabar.....	2,210	201,231	1,779	148,419	1,738	140,306
Sapanwood.....	30,686	104,891	28,790	108,380	44,272	186,238
Aniline dyes.....		7,978,514		6,848,907		7,943,321
Artificial indigo.....	157,748	15,260,078	227,217	12,301,206	256,102	11,816,918
Vegetable indigo.....	42,652	324,807	21,532	182,231	16,029	162,653
Vermilion.....	3,764	263,508	5,020	278,128	8,423	343,376
Dyes and colors (unclassified).....	194,296	2,133,802	195,006	2,281,964	202,146	2,381,536
Total value.....		26,699,054		22,712,306		23,500,835

The foregoing figures show that the most important items in the dye trade of China are aniline dyes and artificial indigo, these two items constituting 85.8 per cent of the total value of dyes imported during 1913 and 84 per cent in 1923.

The year 1913 is considered the last normal pre-war year, and during that year Germany supplied 82.6 per cent of the value of aniline dyes, and approximately 80 per cent of the artificial indigo imported; it is estimated that 20 per cent of the latter came from Switzerland although this is not shown by import statistics.

This preeminence of German manufactures was due to the fact that Germany, in addition to being the most important manufacturing country, had been long in this market, had thoroughly worked

the field and established German brands on a sound footing, and had a very efficient system of distribution throughout the territory.

During the war, while Germany was unable to export dyes abroad, American manufacturers began to sell their dyes in China, although 1918 marks the first serious entry of the United States into the market. Then American manufacturers, their position strengthened by their great progress during the time when Germany could not supply the American market, began earnestly to seek a share of the China trade, with the result that American brands are now becoming well known on the market, and will undoubtedly strengthen their position from year to year.

The year 1923 may be regarded as abnormal in so far as Germany's participation in the trade is concerned, as the German indigo factories are located in the Ruhr, which during part of that year was occupied by France, giving American manufacturers an opportunity to secure wider sales. Imports for the year 1924, while figures are not yet available, indicate a very decided increase in the amount of indigo imported from Germany, estimates placing this at 208,400 piculs out of a total of 343,000 for the first 11 months. The total value (in haikwan taels), of all dyes imported, by countries of origin, during the period from 1919 to 1923, inclusive, shows the rapid recovery of the market by Germany and are given in the following table:

Countries	1919	1920	1921	1922	1923
Hongkong.....	2,271,283	2,832,252	4,252,954	3,704,408	3,569,090
Macao.....	25,758	12,873	36,375	6,324	4,807
French Indo-China.....	22,596	26,238	35,546	31,422	31,656
Siam.....	6,677	17,524	1,290	409	1,832
Straits Settlements.....	83,628	23,500	70,947	321,532	335,791
Dutch Indies.....	14	329,525	1,763	23,122	6,019
British India.....	11,755	47,633	16,371	32,109	12,112
Turkey, Persia, Egypt, Aden, etc.....				8	176
Great Britain.....	186,983	1,284,904	2,207,126	362,768	826,708
Sweden.....		3,000	98,858	15,831	34,347
Norway.....		4,166		11,053	28,031
Denmark.....		13	28	12,497	33,098
Germany.....		3,891,552	5,383,518	8,698,994	9,939,847
Netherlands.....		1,966,060	2,951,197	5,168,992	1,689,777
Belgium.....	44,656	2,014,338	2,178,851	937,862	216,036
France.....	972,904	1,915,706	3,611,694	469,562	742,883
Switzerland.....		3,179,639	1,425,459	1,973,549	2,276,749
Italy.....			106,275	166,926	9,373
Austria and Hungary.....		29,724	420	1,833	
Russia and Siberia.....	23	160		8,799	810
Russia, Amur ports.....		128	2,769	8,819	
Russia, Pacific ports.....	19,180	928	24,123	63,928	6,256
Chosen.....	55,375	22,308	51,456	44,408	81,718
Japan (including Formosa).....	1,650,024	1,894,976	1,788,463	1,334,313	870,846
Philippines.....	11,456	3,277	474		3,711
Canada.....	132,213	67,145	2,302	20,889	5,735
United States.....	2,096,382	6,658,380	3,379,364	1,173,521	3,594,207

Nonsynthetic dyes comprise but a small part of the total dye imports into China, and a comparison of figures for the years shown indicate a downward tendency in favor of synthetic products.

Of these nonsynthetic products, mangrove bark is the most important in both volume and value, and is used both in tanning and dyeing. In dyeing it is used in connection with iron sulphate for a cheap coloring in black, gallnuts being used for the same purpose, and sometimes combined with mangrove bark.

Sapanwood is next in importance. This wood—one of the red-wood family—is usually imported in chips which are ground to sawdust and then soaked with water to form an extract. It can be used for wool dyeing and, therefore, is very likely among the “natural dyestuffs” sometimes employed in the rug industry. It yields varying shades ranging from red to bluish red, depending on the mordant used. This dye can be used also with silk.

Cinnabar and vermilion are both red sulphide of mercury. The crude ore is classed as cinnabar to differentiate from a refined grade which is termed “vermilion.” Its chief use in China is in the preparation of the red paste that serves as a stamp pad for “chops.” It is also used, to some extent, as a pigment.

Under the customs heading “Dyes and colors unclassified,” are included chrome yellow, cobalt oxide, emerald green, Prussian blue, ultramarine, and a wide variety of lakes and pigments, mostly dry colors, largely used in the paint industry. No detailed figures are available.

The most important individual item in China's aniline dye trade is artificial indigo (20 per cent paste) which, in 1923, constituted approximately 50 per cent of the total value of dye imports. Prior to 1905 there was practically no artificial indigo used in China, but about that time two German firms began to import it, and in a short time succeeded in displacing to a large extent the vegetable product.

The situation in the market for aniline dyes other than indigo is practically parallel to that in the indigo market. Germany has long held a dominant position in this trade, and while its share was cut to nothing during the war years, it has made wonderful strides in regaining its share of the market since 1919. The quantity and value (in haikwan taels) of imports of artificial indigo in the years 1913 and 1919 to 1923, inclusive, are given in the following table:

Countries	1913		1919		1920	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Hongkong.....	13,875	523,015	424	34,516	3,930	207,610
Macao.....	33	668				
French Indo-China.....					18	1,520
Straits Settlements.....	19	713				
Great Britain.....	300	8,433	2,256	128,205	11,076	925,192
Germany.....	102,261	3,502,744			21,575	2,614,615
Netherlands.....					12,020	1,134,300
Belgium.....	185,108	5,009,083	30	8,368	13,244	1,173,639
France.....	17,688	579,991	9,348	643,905	21,879	1,849,186
Austria and Hungary.....	550	16,271			313	29,724
Russia, Pacific ports.....			18	3,522		
Japan (including Formosa).....	13	365	1,979	153,421	1,487	112,666
Philippines.....			10	1,320		
Siam.....					342	13,200
Norway.....					40	4,166
Switzerland.....					25,009	2,790,492
Chosen.....			2	153	4	600
Canada.....			10	998	318	17,836
United States (including Hawaii).....			4,766	341,365	44,845	4,470,482
Total gross imports.....	319,847	9,641,283	18,843	1,315,773	156,100	15,345,228

Countries	1921		1922		1923	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Hongkong.....	12,864	895,751	13,431	854,969	11,848	716,495
French Indo-China.....	108	8,856	18,968	18,968	13,718	645,792
Great Britain.....	19,823	1,934,448	1,765	198,973	32,037	4,404,838
Germany.....	17,821	1,857,124	100,307	5,297,811	2,918	211,759
Netherlands.....	17,968	1,906,229	60,230	3,334,945	342	12,885
Belgium.....	16,101	1,409,700	8,478	503,618	10,959	582,802
France.....	38,745	3,535,600	6,991	434,497	112	3,193
Italy.....	496	64,384	3,599	161,131	112	12,105
Russia, Pacific ports.....			13	1,159	20	1,333
Japan (including Formosa).....	265	14,387	99	6,306	2	90
Philippines.....					46,797	2,221,365
Siam.....					62	1,215
Switzerland.....	11,409	1,289,373	39,257	1,932,657		
Chosen.....			2	130		
Canada.....			250	14,422		
United States (including Hawaii).....	25,108	2,617,177	16,029	958,434	90,158	3,185,029
Netherlands Indies.....			10	800		
Total gross imports.....	160,708	15,533,029	250,630	13,715,845	259,016	11,996,841

The value (in haikwan taels) of aniline dyes imported into China for the years 1913 and 1919 to 1923, inclusive, is shown in the following table:

Countries	1913	1919	1920	1921	1922	1923
	Haikwan taels	Haikwan taels	Haikwan taels	Haikwan taels	Haikwan taels	Haikwan taels
Hongkong.....	545,320	230,956	808,744	1,398,186	1,275,208	1,270,672
Macao.....	642	21,437	7,937	28,654		
French Indo-China.....	22,400	400	109	1,490	7,521	28,358
Siam.....		520	615	296	283	454
Straits Settlements.....		452	12	106		
British India.....	10,862	4,467	7,642	6,378	14,563	7,881
Netherlands Indies.....			320,625	170	12,525	4,321
Great Britain.....	261,816	37,008	324,582	250,703	113,077	113,733
Sweden.....	3,546			82,458	15,831	34,282
Denmark.....	436				12,372	30,898
Norway.....					2,280	28,031
Germany.....	2,187,251		1,225,780	3,390,278	3,101,939	4,805,347
Netherlands.....	240,862		824,382	1,041,198	1,724,951	1,394,190
Belgium.....	2,058,870	36,000	838,110	750,128	388,150	137,513
France.....	65,150	316,268	35,144	9,687	6,899	54,527
Switzerland.....			389,147	136,126	40,781	52,331
Italy.....	3,543			38,035	539	2,829
Austria and Hungary.....	9,117			420		
Russia and Siberia by land frontier.....	862	23	160		1,940	
Russia, Pacific ports.....		564	30	1,022	373	
Russia, Amur ports.....	278		15			
Chosen.....		1,026	1,163	634	8,025	10,316
Japan (including Formosa).....	15,744	824,206	1,090,962	699,936	371,807	207,888
Philippine Islands.....		42		370		2,378
United States (including Ha- waii).....	656	1,667,691	2,050,956	684,249	181,454	345,663
Canada.....		131,171	49,309	1,158	330	3,000
Total gross imports.....	5,427,345	3,272,231	7,984,354	8,521,576	7,281,014	8,534,710

NOTE.—For all practical purposes it is safe to consider all indigo and aniline dyes shown as originating in Belgium and the Netherlands as being of German manufacture.

Approximately 95 per cent of all aniline dyes sold in this market reach the consumer in small tins. The following packages are usual: 8-ounce tins, 200 to the case; 1-pound tins, 100 to the case; 20-ounce tins, 100 to the case.

That portion of the dyes sold in bulk is in barrels of 133 $\frac{1}{3}$ to 500 pounds, with the Chinese preference strongly in favor of the smaller barrel.

Dyes are imported into Shanghai by the manufacturer's own office, or agent, and sold to Chinese agents or dealers in Shanghai. These agents and dealers have branch offices or agents in outports throughout the interior, and effect distribution through them.

Dyes which are imported in tins are generally sold under the manufacturer's chop, this, of course, being a Chinese chop taken out especially for this market. Those dyes which are imported in bulk and repacked by the Chinese dealer or agent are sold under his own chop.

Manufacturers of all nationalities appoint Chinese houses to handle certain chops, of which the Chinese house has control and which are sold only through them.

While Chinese firms handling aniline dyes very often also handle indigo, a great many firms selling indigo do not sell aniline dyes. On the other hand, a great many of the firms handling indigo are at the same time consumers, having a dye shop attached.

Dyes are generally sold by the importer to the dealer or agent on a 10-day native order, although this is by no means an absolute rule, credits being given from 30 to 90 days, according to the reliability of the dealer and his relations with the importer. As a general rule, longer credits are given on indigo than on other dyes.

The Chinese generally sell on open credits which are settled four times yearly on the appointed settlement days, although of course there are variations from this rule.

The Germans can be considered practically masters of the market for aniline dyes. Out of a total gross import into China in 1923 valued at 8,534,710 haikwan taels, Germany (including cargo from Belgium and the Netherlands) supplied 6,337,050 haikwan taels' worth—not considering imports from Hongkong, practically all of which were of German origin. (In the case of indigo the German predominance is much less marked, although, as previously stated, 1923 can not be considered a normal year, for the reason that the large indigo manufacturing plants of Germany were in the occupied zone and exported 50 per cent less indigo than in the preceding year.)

American dye importers state that, test for test, American dyes are equal to the German product, and they attribute the hold which German dyes have on the market largely to the fact that their chops are better known, having been in the market longer. The matter of chops is said to be of far greater importance in the dye trade than in the indigo trade and, therefore, the oldest chops on the market have an enormous advantage over the newer.

Markets for various colors are divided according to the colors popular for wear in the various sections of China. For instance, in certain districts the women wear red trousers almost exclusively, and the sales of red dyes in these sections are very much heavier than in sections where the use of other colors is predominant. Direct blues and blacks are the most popular, then come reds and scarlets, then basic violets, greens, and blues.

Sulphur black has made considerable progress in China during the past few years and the bulk of this business is divided between Japan and Germany, with German cargo gradually replacing Japanese.

FOODSTUFFS

The imported foreign foodstuffs referred to in this section consist of fresh, dried, and canned fruits, vegetables, meats, flavoring extracts, pickles, condensed and malted milk, groceries, and all package and bulk articles of this nature exclusive of flour, wheat, and rice.

The market in China for these foodstuffs is found not only among the Chinese population, but also among over 283,000 resident foreigners, of which number 152,000 are Japanese and 96,000 Russians, with the remainder Europeans and Americans. The Japanese and Russians are concentrated in Manchuria, while the other foreign nationals are found in considerable numbers in the larger treaty ports of Shanghai, Hankow, Tientsin, and the British Colony of Hongkong. The main distributing point for North and Central China, including the densely populated Yangtze Valley, is Shanghai, with Hankow and Tientsin of secondary importance. Hongkong is the distribution center for South China. Imported foodstuffs, becoming "foreign" in China, and originally imported solely for the consumption of resident foreigners unable or unwilling to limit their dietary to articles of native produce, have so grown in volume and variety within recent years as to represent a sizable factor in China's imports.

Spreading from the scattered retail stores of every foreign nationality found in every community in China there are a relatively large number of both Chinese and foreign retail and wholesale organizations, with the attendant smaller list of importers, jobbers, and commission houses.

American foodstuffs, particularly canned and package goods, are found in all interior towns of any size, and the Chinese people themselves are consuming these articles in increasing amounts. The two largest department stores in Shanghai, both handling a complete department-store line of both foreign and domestic merchandise, are devoting approximately one-half of their street-floor selling space to foodstuffs. While at first glance this may seem startling, to one familiar with things Chinese and the extent of the Chinese dietary, probably unequaled in the world for its balance, content, variety, and efficiency, it seems in no way unusual. Particularly is this true if we realize further the part which restaurant life and foods play in the Chinese social structure. Restaurants of all sizes, types, and varieties to suits all castes, tastes, and pocketbooks are met with everywhere in China. They are at once the business man's club, theater, and eating place. While Americans may believe themselves to be the originators of the community restaurant, distributing hot cooked dishes ready to serve, the Chinese have possessed this service for some hundreds of years, and also have itinerant cooks shouldering their own stoves, ovens, fuel, foodstuffs, and dishes, prepared to serve anything from Dutch soup to freshly baked bread, at an instant's notice. Large modern Chinese hotels in the larger cities of China to-day serve both European and Chinese food, while

the middle and higher classes of Chinese, either to relieve the routine of their own culinary art or to adopt a modified Western diet, are buying more and more of foreign foodstuffs.

The figures in the following table showing the total gross imports of foodstuffs, except wheat, wheat flour, rice, and paddy, are taken from the published statistics of the Chinese Maritime Customs and illustrate not only the growth of the value of imported foodstuffs but also the growing share taken by American goods, which has increased from 856,000 haikwan taels (\$624,880 gold) or 1.1 per cent of the total in 1913, to 3,847,000 haikwan taels (\$3,077,600 gold), or 4.4 per cent of the total in 1923.

Articles	1913		1923	
	Total	United States	Total	United States
	Haikwan taels	Haikwan taels	Haikwan taels	Haikwan taels
Beans, peas, etc.	1,022,044	4,648	991,050	3,562
Bicho do mar	1,173,061	-----	2,178,882	-----
Birds' nests	654,991	-----	1,052,392	-----
Biscuits	-----	-----	388,450	54,798
Butter (including ghee)	592,453	138	858,923	114,153
Cardamoms	198,465	-----	412,172	-----
Caviar	25,666	196	27,424	-----
Cereals:	-----	-----	-----	-----
Barley	29,822	-----	64,532	32,650
Maize	17,250	-----	15,677	-----
Oats	84,032	5,745	17,774	612
Cheese	110,475	19,827	120,403	43,326
Cinnamon	65,201	-----	91,863	-----
Cloves and spices	94,712	1,719	88,449	3,262
Cocoa, crude	4,140	18	14,132	1,405
Cocoa and chocolate, prepared	60,433	2,985	112,002	27,903
Coffee	82,629	38,578	80,111	36,030
Confectionery (not including chocolate and cocoa)	352,960	10,407	482,082	60,353
Eggs, game, and poultry	32,930	-----	89,687	-----
Fish and fishery products (not including bicho do mar, isinglass, seaweed, and agar-agar)	13,033,646	227,273	19,506,817	204,521
Foodstuffs, unclassified	-----	-----	671,157	-----
Fruits:	-----	-----	-----	-----
Dried	767,278	33,616	2,450,984	642,469
Fresh	665,785	28,172	1,552,044	283,668
Honey	38,856	1,705	18,551	324
Macaroni and vermicelli	795,024	3,308	1,383,923	17,032
Margarine and artificial butter	13,691	-----	34,799	298
Meats, prepared or preserved (including lard and preserved game and poultry)	336,263	23,476	440,801	9,937
Milk, condensed:	-----	-----	-----	-----
In tins (by dozens)	791,546	222,925	253,526	9,200
In tins (by piculs)	-----	-----	1,770,566	1,047,375
Molasses	-----	-----	212,390	316
Mushrooms	663,904	-----	664,390	-----
Pepper, black and white	995,122	-----	887,054	44
Seaweed and agar-agar	1,715,584	-----	3,175,943	-----
Stores, household, not otherwise classified	4,219,006	188,762	4,430,825	1,171,284
Sugar:	-----	-----	-----	-----
Brown	9,240,197	2	6,148,692	24
White	10,652,542	1,113	13,049,495	484
Refined	14,617,831	4,594	30,139,265	10,427
Candy	1,844,718	1,173	3,224,111	-----
Canes	157,091	-----	335,063	-----
Tea	5,283,400	828	818,702	-----
Water, aerated and mineral	200,490	4	237,414	9,527
Wines, beer, spirits, etc.:	-----	-----	-----	-----
Beer and portor	736,078	6	830,317	-----
Wines	1,244,465	14,952	2,306,357	1,503
Spirits	1,165,664	19,460	2,421,622	60,396
Other beverages	55,939	210	202,799	66
Soy	-----	-----	323,270	-----

Value of haikwan tael in United States gold: 1913, \$0.73; 1923, \$0.80.

Foodstuffs are subject to an import duty of 5 per cent ad valorem or the substantial equivalent in specific rates of duty. By a further

payment of one-half of the amount of import duty—that is, approximately 2½ per cent surtax—goods destined for interior points not treaty ports are supposedly exempt from likin or local taxes. There are no existing Chinese regulations corresponding to the United States pure-food laws or in any way regulating the quality and content of imported foodstuffs.

Imported milk products are marketed by an extensive organization in China, independently of other foodstuffs. The same is true for raisins. All other foodstuffs are in general marketed somewhat after the following manner. A Shanghai commission house, jobber, or broker obtains the agency for a food product. The initial shipment of goods on arrival is distributed as far as possible on the Shanghai market and the remainder, if any, goes to outport agencies also on a commission basis to be rehandled in like manner. An extremely limited number of Shanghai concerns have their own representatives in ports such as Hankow, Tientsin, Dairen, and Hongkong, but in most cases these agencies are directly supervised by Chinese, not American or European sales managers.

If a market with the size and potentialities of China does not justify the initial expense of a Shanghai office for distribution and sales promotion work, the detail of a factory or home sales representative to a carefully selected resident commission house or agent is to be recommended. This gives the combined cooperative effort of an agency thoroughly familiar with local conditions and a representative thoroughly familiar with the product. With these working out together an adapted style and size package, label, trade-mark, appropriate advertising matter, combined Chinese and English directions and explanatory matter, recipes, the distribution of samples, use of demonstrators, selection of agents, training of salesmen, and first-hand estimate of market possibilities, satisfactory results are obtained. The non-English-speaking Chinese, by far the majority of Chinese purchasers, buy imported package and canned goods largely on the relative merits of the brand, trade-mark, or chop. Outside of American raisins and canned-milk products few, if any, import packages have an identifying mark in the Chinese language, Chinese descriptive matter, or directions for preparing and serving. A further study of Chinese methods of preparing foods of the Chinese, dietary and language, the development of an intelligent Chinese sales force working through the retail and wholesale stores, restaurants, and dealers, the use of demonstrators illustrating the methods of preparing and serving the foodstuffs, all are highly desirable.

Illustrative of the ready appreciation and use of canned and package foods among the Chinese is the fact that there are more than 11 canning factories in China with a total maximum daily output of 62,000 cans. While these articles can not as yet be said to hold an important place in the everyday dietary of even the wealthier class Chinese, their popularity is increasing. Chinese fruits, vegetables, meats, and biscuits constitute the entire production of these factories.

WHEAT AND FLOUR

Contrary to the popular idea among those unacquainted with China that all the Chinese are rice-eating people, there are millions

of Chinese who do not eat rice, and who probably have never even seen rice. The population of North China, including that of Manchuria, is not, for the most part, rice-eating. These people produce and consume wheat, millet, corn, beans, and sweet potatoes, as the main part of their diet. Other parts of China, even to the extreme southern portions, consume wheat flour, and the quantities consumed are constantly increasing.

Owing to lack of reliable statistical information, estimates as to the total average wheat crop of China vary from 200,000,000 to 600,000,000 bushels.

As the use of wheat flour is becoming more general, exports of wheat and flour from China tend to become less, while imports are rising. The following table shows imports and exports of wheat and wheat flour between China and foreign countries since 1910:

Years	Wheat		Flour	
	Imports	Exports	Imports	Exports
	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>
1910.....	1,392	2,199,186	740,841	901,296
1911.....	3,197	1,926,121	2,183,042	669,889
1912.....	2,564	1,376,689	3,202,501	637,484
1913.....	2,032	1,848,071	2,596,821	133,306
1914.....	998	1,969,048	2,166,318	69,932
1915.....	2,585	1,514,536	177,367	196,596
1916.....	59,555	1,155,179	233,464	289,747
1917.....	36,169	1,557,601	678,849	798,031
1918.....	16	1,815,461	4,551	2,011,899
1919.....	20	4,453,471	271,328	2,694,271
1920.....	5,425	5,431,520	511,021	3,960,779
1921.....	81,346	5,194,022	752,673	2,047,004
1922.....	873,142	1,151,014	3,600,967	593,255
1923.....	2,595,190	639,919	5,826,540	131,553

One picul equivalent to 133½ pounds.

It will be noted that, while the importation of wheat is a recent development resulting from the growth of China's milling industry, large importations of flour were being made as far back as 1911, 1912, and 1913. There was a falling off in imports during and immediately after the war until, in 1920, there was a decided increase, which has since continued.

The principal considerations governing the importation of wheat and flour are price and available domestic supply. When China's crop in districts available to the milling centers is good, the demand for imported wheat is smaller than at times of failure, unless prices are such that it is to the advantage of the millers to import either wheat or flour. In many instances millers will import flour to sell under their own brands, and dispose of their wheat at a profit instead of milling it. At other times they will mill imported wheat and sell the product in competition with imported flour.

American wheat is in very close competition with Australian and Canadian wheat and most mills blend these with Chinese and American wheats. Price and quality are the governing factors in determining the source of imports, and in price considerations the question of exchange rates is of great importance.

Prior to 1921 China's imports of wheat were small, the heaviest being in 1916 when 59,555 piculs were imported, principally from

Russia and Siberia. This is due largely to the fact that the development of the Chinese milling industry has occurred within the past 15 years, and from 1914 to 1921 little of the world's wheat supply was available to China—in fact, China was exporting large quantities. Beginning with 1922, however, imports have assumed important proportions, owing to poor wheat crops in 1922 and 1923. The following tabulation shows sources of imports for 1922 and subsequent years as compared with 1921, the most important previous year:

Imported from—	1921		1922		1923		First 9 months 1924, Shanghai only	
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
Hongkong.....	37	101	403	1,090	181	405	5	23
British India.....			1	8	5	100		
Russia, Amur ports.....					158	632		
Chosen.....	8,763	29,987	1,083	2,551	2	8		
Japan (including Taiwan)...	65	322	9	46	61	257	111	474
Canada.....			7,480	25,061	298,037	1,136,758	1,939,213	6,138,026
United States (including Hawaii).....	72,481	271,395	800,827	2,807,701	2,010,690	6,935,938	1,927,156	6,820,563
Australia, New Zealand, etc.....			63,339	221,350	286,056	1,021,967	1,181,306	4,282,282
Total.....	81,346	301,805	873,142	3,057,807	2,595,190	9,096,065	5,047,791	17,241,368
United States share per cent.....		89.9		91.16		76.25		39.56

NOTE.—Value of haikwan tael in United States gold: 1921, \$0.76; 1922, \$0.83; 1923, \$0.80; 1924, \$0.7983.

Shanghai, being the most important milling center in China (aside from Manchuria, which ordinarily grows its own wheat supply), has imported 88.04 per cent of the total wheat imports of China during 1921–1923, inclusive. Based on this percentage, it may be assumed that China's total wheat imports for the year 1924 will be around 5,734,000 piculs, as practically none was imported after September.

Wheat is imported through American, Japanese, British, and Chinese import houses, which buy either through their own branches in the country of supply or through exporters or brokers in those countries. Japanese houses do a large portion of the business in China because they have their own branches in America, and in some instances have their own steamship lines over which to effect shipment. Wheat from the United States, Canada, and Australia is bought and sold under Government certificates covering both grade and weight. In general it is a "cash" business both for the importer and the Chinese customer, although these terms may vary with the facilities and connections which the importer has in the country of purchase and his relations with his customer in China.

Imported wheat arrives both in bulk shipments and sacked. Owing to the lack of modern handling facilities in Shanghai, bulk shipments are sacked in the hold before handling if possible. Approximately 40 per cent of the wheat arriving at Shanghai is discharged on shore and handled through godowns, the remainder being discharged in the stream onto lighters. The average rate of discharge of sacked wheat is from 800 to 1,000 tons per day.

While China's modern milling industry has increased tremendously, there are still thousands of old-fashioned native stone grind-

ers working throughout the interior, turning out a coarse grade of flour for local consumption. It is the gradual education of the people to an appreciation of well-milled flour, as well as the increasing use of all flours, that is causing the advance in the importation of foreign flour and the increasing demand for the excellent product turned out by the modern mills.

China's flour imports depend on the domestic wheat crop and on prices both for domestic and for foreign flour. Poor wheat crops during 1922 and 1923 caused large imports of flour, but it is probable that imports during 1924 will show a heavy falling off from these two years. It is thought that China's milling capacity will gradually increase until it is able to supply the normal demand for high-grade flour, and that imports will depend largely upon the extent to which price fluctuations make such trade profitable.

The share of the United States in the flour business of China (direct imports) was 31.83 per cent in 1921, 54.97 per cent in 1922, and 60.07 per cent in 1923. In addition to these direct shipments, the bulk of Hongkong's shipments into China consisted of American flour, which brings the total share of the United States up to approximately 88 per cent in 1921, 89 per cent in 1922, and 82 per cent in 1923.

During the buying season, usually from November to April, the larger Pacific coast mills have representatives in China, and through them supply the more important buyers. There are, however, particularly in seasons of free buying, a good many smaller orders which go to Pacific coast brokers and exporters.

The flour import business is done by Chinese, American, British, and Japanese import houses, who usually import flour under some specified chop or brand. As a rule, letters of credit are opened in favor of exporters or brokers in the United States and importers in China selling for cash on delivery.

It is impossible to determine the principal flour importing section of China, as the standing of the ports changes from year to year with changes in crop conditions and prices in the various sections of China. In 1923 Tientsin took 24.9 per cent, Shanghai 18.1 per cent, and Dairen 14.8 per cent of the total, while in 1921 Canton led with 25.8 per cent, and Shanghai followed with 24.7 per cent, Tientsin taking but little over 1½ per cent.

Both wheat and flour are imported into China duty free.

CIGARETTES AND TOBACCO

The volume of the cigarette business in China is undoubtedly one of the best examples of results which can be obtained in that country through a systematic building up of the market and the development of a thorough and elaborate system of advertising, merchandising, and distribution.

Cigarette smoking, while a habit very recently acquired in China, is to-day cited as an extraordinary example of the luxury purchasing power of a people whose per capita wealth is extremely low.

According to the best available records the importation of cigarettes was begun about 1890, when a few cases per year were brought in and sold in carton lots to shopkeepers for disposal among foreigners in the ports.

Gradually, Chinese in the treaty ports experimented with and adopted the cigarette, and in 1902 cigars and cigarettes were given a separate heading in the Chinese Maritime Customs returns. In that year imports under this heading were valued at 1,199,119 hai-kwan taels. (During 1902, 1 haikwan tael=\$0.64 United States currency.)

The rapid growth of this trade since then, and the increase in imports of cigarettes from the United States, in periods from 1910 to 1923 inclusive, are shown in the following table:

Imported from—	1910		1914		1919		1923	
	Thou- sands	Haikwan taels	Thou- sands	Haikwan taels	Thou- sands	Haikwan taels	Thou- sands	Haikwan taels
Hongkong.....	217,616	441,463	368,740	932,319	707,005	2,774,243	400,637	1,306,021
Macao.....	360	1,006	427	1,192	1,566	4,188	3,227	6,729
French Indo-China.....	8,872	17,735	41,563	55,965	13,068	17,289	3,121	5,509
Siam.....			1	7	49	377	120	240
Straits Settlements.....	11,000	19,910	3,883	5,023	1,400	8,470		
Dutch Indies.....							143	481
British India.....	25,096	45,845	196	548	1,394	3,964	621	2,851
Turkey, Persia, Egypt, Aden, Algeria, etc.....	15,352	79,667	12,055	128,179	5,962	51,000	3,954	62,365
Great Britain.....	2,112,566	4,049,501	4,439,607	9,806,899	153,433	1,021,148	518,825	3,703,789
Denmark.....								
Germany.....	5,816	20,020	79,206	160,626			2,586	13,810
Netherlands.....	80	480	1	7			150	700
Belgium.....	67	233	90	373			24	109
France.....	10,013	25,556	1,656	3,674	2,154	10,502	6,819	7,611
Italy.....	358	744	1,052	3,954	577	3,752	551	4,878
Austria and Hungary.....	25	150	49	237				
Russia, European ports.....	52	311						
Russia and Siberia by land frontier.....	495,650	743,565	544,501	1,089,846			395	739
Russia, Amur Ports.....	133	249			30	40		
Russia, Pacific Ports.....	745	3,542	2,720	4,249	600	548	2,202	4,852
Chosen.....	20,050	36,536	127,798	274,568	557,225	905,617	80,692	210,642
Japan (including For- mosa).....	325,134	604,438	207,022	413,095	380,004	992,100	43,820	118,461
Philippine Islands.....	1,017	1,970	6,051	18,013	11,264	36,926	7,258	13,822
Canada.....			186,875	295,730	1,819,590	4,605,727	907,063	2,277,866
United States (including Hawaii).....	532,112	968,216	162,500	322,550	4,239,735	11,006,437	8,197,159	20,752,039
Gross imports from foreign countries.....	3,782,114	7,061,137	6,155,994	13,517,060	7,895,056	21,442,328	10,179,369	28,493,514
Reexported to foreign countries.....	58,569	158,891	110,586	195,444	123,109	478,879	62,476	220,899
Net imports from foreign countries.....	3,723,545	6,902,246	6,045,408	13,321,616	7,771,947	20,963,449	10,116,893	28,272,615

NOTE.—Value of haikwan tael in 1910 was \$0.73 gold; in 1914, \$0.67; in 1919, \$1.39; in 1923, \$0.80.

It is impossible to state what quantity of American cigarettes find their way into China through Hongkong. However, it is of interest to note that in 1923 Hongkong imported cigarettes to the value of 97,289 pounds sterling from the United States, and a large portion of these were reexported to China.

While the importation of cigarettes has grown rapidly, this by no means illustrates the growth of consumption in China. A well-known tobacco journal recently estimated the consumption of cigarettes in China as approximately 40,000,000 yearly (as compared with about 60,000,000,000 in the United States). Statements made by various authorities in China seem to indicate that, if anything, this estimate is low. In 1910 importation of tobacco was, according to the Chinese Maritime Customs, about 14,000,000 pounds. In 1916 this had increased to approximately 20,000,000 pounds. The

rapid development of the cigarette manufacturing industry since that time has increased the importation of tobacco until, in 1923, imports totaled 43,000,000 pounds.

Imported tobacco is used almost entirely in the manufacture of cigarettes. Only foreigners use imported tobacco for pipe smoking and the quantity is negligible. Chinese use native tobacco for smoking in native pipes.

Imports of tobacco into China are shown in the following table:

Imported from—	1910		1914		1919		1923	
	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels	Piculs	Haikwan taels
Hongkong.....	35,859	495,949	47,366	625,684	21,670	494,907	32,155	1,239,904
Macao.....	9,335	45,940	3,324	18,423	2,278	13,585	2,598	32,271
French Indo-China.....	211	6,630	247	9,674	44	1,514	211	10,558
Siam.....	19	547	123	3,222	21	538	62	1,736
Straits Settlements.....	139	1,546	469	5,004	60	6,996	8	363
Netherlands Indies.....	236	2,031	372	15,940			122	407
British India.....	179	1,996	45	1,338	244	4,836	22	318
Turkey, Persia, Egypt, Aden, Algeria, etc.....	66	1,365	247	7,500	5	337	259	18,215
Great Britain.....	1,979	46,109	253	30,957	1,929	48,969	654	113,749
Germany.....	70	11,052	5,436	162,724			184	5,091
Netherlands.....				3			105	9,138
Belgium.....	21	597	30	896			88	9,964
France.....	279	3,279	58	1,787	3	189	633	39,124
Italy.....	24	269					77	6,240
Austria and Hungary.....	1	80	19	553				
Russia, European ports.....								
Russia and Siberia by land frontier.....	4,580	114,500	5,246	196,532			35	447
Russia Amur ports.....			59	730				
Russia Pacific ports.....	2,015	39,625	975	23,570	297	854	87	2,624
Chosen.....	125	3,842	5,573	57,741	16,061	306,437	35,352	600,248
Japan (including Formosa).....	7,364	152,512	3,637	93,742	13,762	368,264	15,918	359,231
Philippine Islands.....	208	3,459	4,590	164,193	1,998	95,925	3,101	67,823
Canada.....	82	3,361	95	3,920	26,821	927,390		
United States (including Hawaii).....	40,846	1,123,753	41,196	1,314,084	81,799	3,283,243	229,616	10,538,725
Denmark.....				6				
South Africa (including Mauritius).....							10	669
Mexico and Central America (including Formosa).....							1	113
Gross imports from foreign countries.....	103,638	2,058,442	119,360	2,733,223	166,992	5,553,984	321,298	13,056,958
Reexported to foreign countries.....	1,171	33,531	1,006	44,975	7,168	202,993	5,986	366,280
Net imports from for- eign countries.....	102,467	2,024,911	118,354	2,683,248	159,824	5,350,991	315,312	12,690,678

NOTE.—Value of haikwan tael in 1910, \$0.73 gold; in 1914, \$0.67; in 1919, \$1.39; in 1923, \$0.80. One picul equivalent to 133½ pounds.

In 1914 an additional classification was made in the Chinese Maritime Customs returns to cover imported tobacco, by value only. Total gross imports under this heading were: 14,434 haikwan taels in 1914; 30,815 in 1919; and 86,338 in 1923.

In addition to the direct imports from the United States, a large quantity of American tobacco reaches China through Hongkong. Statistics showing exact quantities are not available, but in 1923 Hongkong imported raw tobacco from the United States to the value of 84,569 pounds sterling, the greater part of which undoubtedly found its way into China. The manufacturing companies consume a large amount of Chinese tobacco both for making cigarettes of pure Chinese tobacco and for blending with imported leaf. China pro-

duces all the varieties of tobacco grown in the United States, and many additional types. From the custom of Chinese trade in classifying Chinese produce under the name of the district in which it originates or according to some simple numerical system, it is impossible to give a type corresponding either to the American commercial or to the botanical classification. The better known types which are exported are "Namheung," "Wongkong," "Tungchow," and "Kwong-fung." In both Shantung and Honan Provinces much tobacco is produced annually from Virginia seed, the tobacco seed being brought over from America each year and cultivation supervised by American tobacco experts. Other prominent types are: "Willow leaf," "green veined," "yellow," "fragrant amber," "hollyhock," "uneven," and innumerable others. Tobacco is also commonly classified as cigarette, cigar, and pipe tobacco. All three types are grown in China. The largest quantities are consumed in cigarettes, the quantity consumed in native pipes ranks a steadily decreasing second, and cigars constitute an increasing third. Cigarettes tend to displace the old water pipe, and cheap cigars are rapidly assuming an important place in popular demand. If the figure of 3 pounds of tobacco per thousand cigarettes is taken, the 1923 tobacco imports would be sufficient to manufacture approximately 14,300,000,000 cigarettes. On this basis it would appear that 47,000,000 pounds of Chinese tobacco are used each year to manufacture cigarettes, although no statistical substantiation of this figure is obtainable. To-day, not only foreign firms manufacture cigarettes in China, but there is one very large Chinese company and several smaller ones manufacturing for the native trade.

In addition to cigarettes and tobacco, the cigarette trade is directly responsible for the importation of large quantities of lumber, tin plate, printing inks and materials, cigarette paper, foil, cardboard, printing paper, wrapping paper, glassine paper, and glue. Some of these items are included in a separate customs classification, "Cigarette-making materials," under which heading 1923 gross imports totaled 2,166,619 haikwan taels. Owing to the fact that much of this material is classified in the customs returns under headings such as "foil," "paper," etc., it is impossible to give exact figures, but the total amounts used in connection with the manufacture of 30,000,000,000 cigarettes a year must reach a very high figure.

According to Shanghai customs statistics the great bulk of cigarette imports consists of those valued between 1.50 and 3 haikwan taels per thousand. The imports of cigarettes into Shanghai from January to September, 1924, inclusive, are shown in the following table:

Value per thousand	Number in thousands		Value in haikwan taels	
	United States	Total	United States	Total
1.50 haikwan taels or less.....	56,956	91,185	70,746	115,232
1.50 but not over 3 haikwan taels.....	5,491,741	5,993,213	13,771,886	15,016,860
3 but not over 4.50 haikwan taels.....	31,985	33,500	142,818	149,430
4.50 but not over 6.50 haikwan taels.....	1,925	101,338	8,681	615,135
6.50 but not over 8.50 haikwan taels.....	300	39,428	2,001	320,235
8.50 but not over 12.50 haikwan taels.....	1,753	116,476	19,993	1,097,671
Over 12.50 haikwan taels.....	215	4,746	4,622	79,623
Total.....	5,584,875	6,379,886	14,020,747	17,394,186

The import duty on 1,000 cigarettes in haikwan taels is as follows:

Value over 12.50 haikwan taels per 1,000 and all cigarettes not bearing a distinctive brand or name on each cigarette.....	0.83
Value over 8.50 but not over 12.50 haikwan taels per 1,000.....	.53
Value over 6.50 but not over 8.50 haikwan taels per 1,000.....	.38
Value over 4.50 but not over 6.50 haikwan taels per 1,000.....	.28
Value over 3 but not over 4.50 haikwan taels per 1,000.....	.19
Value over 1.50 but not over 3 haikwan taels per 1,000.....	.11
Value 1.50 haikwan taels or less per 1,000.....	.06

Among the factors contributing to the expansion of business in cigarettes, first place should be given to existing marketing methods as compared with those of 1900. In those days, cigarettes were sold through the compradors of foreign houses established in treaty ports, in the same manner as many other commodities are handled even to-day. The importer had no knowledge of the market's requirements, of the demand, or of the conditions under which his goods were sold to the consumer. The transaction was ended, so far as he was concerned, when the goods were delivered to buyers through his comprador.

Great strides have been made since then. Trade has been developed by intensive working of markets in the interior, through advertising and sales effort, appointing of local agents and distributors, and the constant and intelligent study of the very diverse requirements of the markets in various districts.

The outstanding feature of the method by which the largest foreign company sells in China is their breaking away from the old, established method of conducting business through import houses and compradors. They have put in their own elaborate dealer and distributor system throughout the interior, supervised directly by foreigners in branch offices located at strategic points.

The most widely used method of distribution is selling through Chinese dealers who are known as division dealers and who cover a certain allotted territory, which is usually a whole provincial district. Under these division dealers, who act as chief distributors for their various territories, are appointed subdealers, who are the actual means of bringing the goods to the consumer.

The division dealers put up cash security against which credit is allowed for goods supplied on consignment. Goods consigned may be double the value of the cash security, the balance being secured by written guaranty bond or "shop guaranty." Division dealers are held financially responsible for subdealers.

Division dealers obtain a rebate ranging from 5 to 10 per cent, which is either deducted from the purchase price or paid 50 per cent on purchase and 50 per cent at the end of the Chinese year. On retail sales the subdealers receive a profit of 10 to 20 per cent and allowances are also made on the return of cases.

In certain instances the sale of specific brands has been assigned to Chinese agents who have complete responsibility for the sale and distribution of the brand throughout China. By this method one brand has made a conspicuous success and is now one of the five largest-selling brands in the world.

Originally, pioneer work was done in conjunction with advertising matter in the form of posters, handbills, and similar mediums.

This material was not of the quality employed to-day, but was intended to make a strong appeal to the uninformed mind of the public.

At present the largest foreign cigarette company operates an extensive advertising department where foreign advertising experts work in collaboration with a corps of Chinese advisors. This department designs newspaper displays, posters, and hangers, calculated to make the strongest appeal to the Chinese. The distribution of cigarette cases and other novelties is cared for. A very complete motion-picture plant is maintained. Educational and travel pictures are produced and distributed through the various motion-picture houses in China in conjunction with advertising for certain brands of cigarettes.

The other foreign and Chinese cigarette companies conduct advertising campaigns through the press and by means of billboards, posters, and calendars, but necessarily on a smaller scale.

The rapid growth of the cigarette trade is primarily due to the opening up of new territory by the cigarette companies, and it promises steady increase as the use of cigarettes becomes more general in territory already covered and as new districts are worked intensively. In view of the fact that China is to-day consuming not over one-sixth of its capacity as a cigarette user, it is felt that an excellent and increasing business for American-made cigarettes and American tobacco can be expected.

COTTON GOODS

Cotton manufactures constitute by far the largest single item in the import trade of China. During 1923 imports of cotton yarn and thread amounted to 103,605.159 pounds plus 1,212,705 gross spools of thread valued at 43,553,743 haikwan taels. Imports of piece goods and other cotton manufactures were valued at 129,966,368 haikwan taels, making a total value of 173,520,111 haikwan taels, and representing 18.79 per cent of China's total imports for that year.

The enormous population of China depends largely on cotton goods as a material for clothing. The better class of Chinese is using an increasing amount of wool, and silk is likewise an important material for dress, but the masses are too poor to afford them. The climate in many sections of the country is sufficiently mild to permit the general use of cotton clothing throughout the greater part of the year, and even in the colder section cotton garments stuffed with raw-cotton wadding are worn during the winter months.

The following table shows the value, in haikwan taels, of the imports into China of all articles and imports of cotton manufacture (including thread and yarn), also the percentage that the latter bears to the total import trade during the years 1880-1923:

Years	Value of total imports in haikwan taels	Imports of cotton manufactures		Value of haikwan tael in United States currency
		Value in haikwan taels	Per cent of total	
1880.....	79,293,452	23,382,957	30.54	\$1.41
1885.....	88,200,018	31,493,823	35.70	1.29
1890.....	127,093,481	45,020,302	35.41	1.27
1895.....	171,696,715	53,074,164	30.91	.80
1900.....	211,070,422	75,606,360	35.82	.75
1905.....	447,100,791	181,452,953	40.58	.73
1910.....	462,964,894	130,679,235	28.22	.66
1913.....	570,162,557	182,419,023	31.99	.73
1914.....	569,241,382	183,428,473	32.21	.67
1915.....	454,475,719	149,300,513	32.85	.612
1916.....	516,406,995	136,679,386	26.47	.819
1917.....	549,518,774	158,950,267	28.93	1.08
1918.....	554,893,082	171,380,423	27.28	1.26
1919.....	646,997,681	209,786,337	32.4	1.39
1920.....	762,250,230	246,813,429	32.3	1.24
1921.....	906,122,439	208,662,426	23.0	.76
1922.....	945,049,650	218,523,170	23.1	.83
1923.....	923,402,887	173,520,111	18.8	.80

The principal sources of supply for the large volume of cotton piece goods consumed in China are England, Japan, and Hongkong, with smaller quantities from the United States, France, Netherlands, Canada, Germany, Italy, and India.

A good indication of the origin of imports may be gained from the following table, which shows the value, in haikwan taels, of the gross imports of cotton piece goods and cotton thread:

Year	United States	Great Britain	Japan	Hongkong	All other	Total
1913.....	8,932,699	60,038,160	22,894,732	11,795,093	9,484,701	113,145,385
1914.....	4,858,556	64,346,128	25,992,074	11,914,125	6,982,644	114,093,527
1915.....	3,075,642	42,878,260	26,247,361	10,915,444	1,104,326	84,221,033
1916.....	1,753,499	32,262,460	29,777,359	9,667,759	3,827,098	77,288,175
1917.....	441,160	31,421,794	54,685,716	11,451,487	1,294,488	99,294,645
1918.....	690,674	31,872,302	57,142,096	10,441,767	2,127,600	102,274,439
1919.....	2,116,235	36,921,744	87,158,792	12,488,826	5,883,567	144,569,164
1920.....	2,173,069	74,149,316	77,757,705	10,975,084	8,126,707	173,181,911
1921.....	2,961,586	64,768,547	62,169,523	15,584,915	3,708,727	149,193,298
1922.....	2,183,488	63,961,428	71,382,417	16,114,192	3,556,098	157,194,623
1923.....	281,817	47,668,770	68,132,934	15,307,542	3,464,392	134,558,455

It will be noted that Hongkong is credited with a large portion of the cotton goods imported. Hongkong does not produce cotton goods but is merely a transshipment point. In order to form an approximate idea of the countries of origin of the cotton goods imported into China from there the analysis of Hongkong's imports of this class of merchandise during 1923 is shown in the following table:

Items	United Kingdom	United States	Japan	North and Middle China ¹	All other	Total
Value in pounds sterling.....	2,365,241	12,348	1,147,775	427,944	172,131	4,125,439
Per cent.....	57.3	.3	27.8	10.4	4.1	

¹ Exported from Hongkong to foreign countries and also to South China.

Owing to the low individual purchasing power of the bulk of China's population, the China market is primarily one for low-priced cotton goods—not necessarily common quality, but fair to good quality textiles which are relatively less expensive to purchase than high-grade finer textiles such as are used in the United States, Argentina, and some other countries. The development of the country along modern lines enhancing the purchasing power of its people will undoubtedly make a market for a greater proportion of finer and higher priced materials, but the backbone of the business will probably always be the demand for the cheaper goods by the masses.

The quantities of the principal lines of cotton piece goods imported during the years 1913 and 1923 from Great Britain, Japan, and the United States, the changing position of Japan and Great Britain in the trade, and the heavy falling off in America's share during the period are shown in the following table:

Items	Great Britain		Japan		United States	
	1913	1923	1913	1923	1913	1923
	<i>Pieces</i>	<i>Pieces</i>	<i>Pieces</i>	<i>Pieces</i>	<i>Pieces</i>	<i>Pieces</i>
Shirtings, grey, plain.....	3,527,455	1,009,838	95,227	1,691,361	45,725	.....
Sheetings, grey, plain.....	127,510	10,120	3,356,011	1,124,515	1,559,255	667
Shirtings, white, plain.....	3,730,898	1,430,760	61,438	446,546	2,262	316
Shirtings, white, figured.....	57,144	90,064	15	3,298	.....	364
White Irishes.....	43,098	10,700	.....	.....	.....	.....
Drills.....	44,894	1,781	1,666,757	240,707	507,138	2
Jeans.....	1,498,114	117,905	94,377	1,703,387	37,580	.....
T cloths, 32-inch.....	900,682	20,250	372,741	284,316	.....	.....
T cloths, 36-inch.....	48,035	.....	1,257	127,369	.....	.....
T cloths, bleached, 30-inch by 40 yards.....	.....	49,694	.....	13,429	.....	.....
Cambrics, lawns, muslins.....	230,582	278,839	13,105	62,052	.....	844
Lenos and balsarines.....	28,058	30,546	.....	149	.....	.....
Plain cotton prints.....	348,275	341,792	6,686	964,159	519	19,118
Printed drills, furnitures and twills.....	77,500	20,843	.....	42,580	.....	.....
Printed crêpe.....	.....	8,252	.....	142	.....	.....
Printed sateen, rep, etc.....	119,445	88,266	32	15,011	126	35
Turkey red cottons and dyed T cloths.....	697,101	2,042	233,188	520,187	.....	.....
Dyed cottons, plain, fast black.....	1,611,838	1,111,678	1,792	389,262	.....	152
Dyed cottons, plain, colored.....	764,814	407,483	21,817	2,456,658	99	.....
Dyed cottons, figured.....	746,636	304,364	7,236	143,301	37	103
Shirtings, dyed, plain.....	61,833	4,830	8,462	146,760	.....	.....
Shirtings, Hongkong-dyed, plain.....	.....	.....	.....	1,162	.....	.....
Cotton, Spanish stripes, 64-inch.....	31,676	10,599	.....	445,664	234,515	1,825
Flannelettes, plain, dyed or printed.....	98,035	2,253	57,406	59,587	.....	1,560
Flannelettes, yarn dyed.....	.....	20,757	.....	13	.....	.....
Crimps and crepons.....	.....	.....	.....	.....	.....	.....
Cotton blankets.....	82,967	12,209	200,274	71,262	609	180
Total.....	14,876,590	5,385,895	6,197,821	10,952,877	2,387,865	25,166
	<i>Yards</i>	<i>Yards</i>	<i>Yards</i>	<i>Yards</i>	<i>Yards</i>	<i>Yards</i>
Fancy muslins.....	.....	5,581	.....	.....	.....	.....
Art muslins and cretonnes, unenumerated.....	.....	337,088	.....	325,908	.....	3,343
Cottons, yarn dyed.....	.....	3,557,928	.....	3,176,215	.....	25,971
Crimps and crepons.....	.....	4,500	.....	6,546	.....	.....
Japanese cotton crêpe.....	.....	64,061	187,457	502,772	.....	.....
Japanese cotton cloth.....	.....	.....	10,574,401	41,777,332	.....	.....
Velvets and velveteens.....	4,535,217	2,231,109	9,492	171,511	.....	7,642
Cotton goods, unenumerated.....	5,343,926	2,253,261	60,156,719	2,851,575	18,812	195,364
Total.....	9,879,143	8,453,528	70,928,069	48,811,859	18,812	232,320
	<i>Dozen</i>	<i>Dozen</i>	<i>Dozen</i>	<i>Dozen</i>	<i>Dozen</i>	<i>Dozen</i>
Cotton handkerchiefs.....	971,843	1,574,070	59,961	257,102	.....	3,635
Cotton towels.....	124,706	126	1,431,132	42,851	24	590
Total.....	1,096,549	1,574,196	1,491,093	299,953	24	4,225

While space does not permit an exhaustive study of the various types of cloth which each country supplies to the China market, a brief statement regarding the position in the market of the two main suppliers, Great Britain and Japan, and also of the United States, may be of interest. [For a detailed study of the piece-goods market of China, reference is made to Special Agents Series No. 107, Cotton Goods in China, by Commercial Agent Ralph M. Odell, published by the Bureau of Foreign and Domestic Commerce, Washington, D. C.]

The relative positions of these three countries have undergone marked changes during the past 20 years as shown in the following table of the percentages secured by them in the total cotton-piece goods imports of China:

Countries	1902	1913	1923
Great Britain.....	55.3	53.3	35.2
Japan.....	2.7	20.2	51.0
United States.....	26.8	8.0	.02
All other countries.....	15.2	18.5	13.8

Japanese manufacturers are enjoying an increasing portion of China's trade by reason of their proximity to the market and their excellent transportation facilities for making quick deliveries, the willingness of Japanese importers and dealers to handle goods at a smaller margin of profit than other foreign firms in China, their liberal attitude regarding credits to Chinese dealers, cheaper cost of packing because of the much shorter distance from mill to consumer, dumping, speculation in raw cotton, readiness to exactly copy good designs originated by other producers, and their cheaper prices.

Although Japanese spinners are turning out finer cloths than they were a few years ago, practically all Japanese imports into China are in plain or simple weaves, i. e., goods easily made, and of coarse counts and consequently of lower grade cotton, and in colored goods where simple dyeing and finishing only are required. Importations are chiefly made up of plain grays, low-grade colored lastings, cotton flannels and cotton blankets, and cheap printed cottons. One of the largest items, some 48,000,000 yards in 1923, is in "Japanese cotton cloth," a plain gray unsized cloth for finishing in China, in which Japan has no competition. This material is handled mostly by Japanese importers who sell direct to dye works. After being dyed the material is sold under the name of "dyed shirtings."

China is a natural market for Japan in the cloths which the latter is well equipped to manufacture, and the energy and earnestness of Japanese manufacturers and merchants will undoubtedly bring about further increases in Japan's already large share in the trade of China.

Great Britain's position in the China market is a strong one. British chops are well and favorably known, and old, established houses are handling this trade with the strong backing of British banks. The items which go to make up the bulk of Great Britain's trade with China are those in which British manufacturers excel—namely, plain white shirtings; all classes of printed cottons; lawns;

dyed plain and fancy cottons; velvets and velveteens. A fair proportion of British cotton piece goods is sold at three auctions held weekly. This method of buying is extremely popular with the Chinese, and auction chops in many cases bring higher prices than equally good cloths sold otherwise.

Great Britain is losing both to Japanese and to Chinese cloths much of its trade in coarse yarn cloths, but it is felt that in the materials in which these countries do not compete, British manufacturers will continue to secure the bulk of the business unless far more serious competition develops from the United States than has been felt during the past 10 years.

The weaving industry in China has made rapid strides during the past five years. In 1919 there were 8,200 power looms in all of China, while in June, 1924, there were 16,273 looms working and 6,500 under construction. It is calculated that these looms, working 12 hours a day for 300 days a year, have an annual capacity of approximately 342,000,000 yards of cloth (of 50 picks per inch). The reasons for the growth of the spinning industry in China and its concentration in Shanghai are discussed in this section under the headings of "Cotton and yarn" and "Textile machinery."

In addition to the production of plain gray cloths, there are in China several bleaching and dyeing plants well supplied with modern equipment. These plants not only finish native-made cloths, but also imported gray goods which are sometimes handled on contract and sometimes bought outright and resold as white or dyed goods. Recently a plant has been established for dyeing and printing, and has turned out some very creditable prints for the domestic market.

There is little need for modern dye works in China at present, as the vast majority of the work is done by native dye shops throughout the country, who dye yarn for weavers and cloth for local piece-goods dealers, and these methods will doubtless be followed for many years to come.

RAW COTTON AND COTTON YARN

Cotton manufacturing in China, in a modern sense, is of comparatively recent development. Before the war with Japan the Chinese were beginning to erect spinning mills, but only in a half-hearted way. Prior to 1895 foreigners were not permitted to operate mills, but among the concessions from China under the treaty of Shimonoseki, signed in 1895, was the right of foreigners to import machinery and to engage in manufacturing industries of all kinds in the treaty ports of the country. Immediately several of the foreign firms that were large importers of English piece goods and Indian yarns took advantage of the provisions of the treaty and began the erection of spinning mills. Previous to that time there had been in operation six native-owned mills containing 183,000 spindles. By the end of 1896 a number of foreign mills, with a total of about 400,000 spindles, were in operation in Shanghai.

The rapidity with which the industry has developed is indicated by the fact that in June, 1924, there were 3,032,246 cotton spindles in China, with a further 658,396 spindles in construction. At the same date there were 16,273 looms, and 6,504 in course of erection.

The output of these spindles is from 800,000 to 1,000,000 bales (1 bale equals 400 pounds) of yarn per year.

Calculating that each loom works 12 hours a day, it should produce 72 yards of cloth of 50 picks per inch. Reckoning this at 70 yards for 16,273 looms working 300 days a year the capacity is 341,733,000 yards, or 8,543,325 pieces of 40 yards in length.

The published figures of the Chinese Maritime Customs show that exports of cotton yarn through the Maritime Customs (practically 100 per cent being interport trade) have increased from 28,192,933 pounds in 1900 to 290,475,630 pounds in 1923, while in the same period sheetings have increased from 29,360 pieces to 3,441,147 pieces. The total value in haikwan taels of manufactured cotton goods passing through the Maritime Customs in 1923 was as follows:

Sheetings, 3,441,147 pieces.....	20, 119, 519
Drills and jeans, 945,643 pieces.....	4, 883, 342
Native cloth (fancy), 501,323 pieces.....	2, 038, 773
Nankeens, 29,341,863 pounds.....	13, 409, 242
Cotton towels.....	938, 333
Cotton socks.....	1, 764, 792
Cotton blankets and counterpanes.....	476, 826
	<hr/> 43, 630, 827

In addition to the power looms the use of hand looms in China is more extensive than in any country in the world, but these do not enter into the market for imported cotton or imported yarns.

During the year 1913 the total net importation of raw cotton into China was 134,735 piculs, but with the rapid growth of cotton manufacturing this grew to 1,614,371 piculs in 1923. Sources and values of these imports are shown in the following table:

Sources	1913		1923	
	Quantity	Value	Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
Hongkong.....	9, 081	215, 800	7, 084	135, 227
Macao.....	702	17, 567	360	8, 606
French Indo-China.....	2, 133	36, 352	10, 233	226, 590
Siam.....	1	15		
Straits Settlements.....	496	11, 432	1, 706	65, 030
British India.....	83, 169	1, 824, 683	1, 147, 948	36, 960, 526
Turkey, Persia, Egypt, Aden, etc.....			3, 498	199, 615
Great Britain.....	3	42	1, 185	47, 055
Germany.....	1	14		
Belgium.....	187	1, 237		
France.....	17	301	375	13, 125
Russia and Siberia by land frontier.....	12	290		
Russia, Pacific ports.....	2, 321	46, 420		
Chosen.....			596	3, 153
Japan (including Formosa).....	15, 214	363, 417	386, 398	13, 341, 732
Philippines.....			10	162
United States (including Hawaii).....	26, 310	608, 891	72, 851	3, 389, 467
Gross imports.....	139, 647	3, 126, 461	1, 632, 244	54, 390, 288
Reexports.....	4, 912	109, 143	17, 873	574, 087
Net imports.....	134, 735	3, 017, 318	1, 614, 371	53, 816, 201

Shanghai, having 63 per cent of the total spindles of China (2,330,270 erected and under construction, as compared with 3,690,-

642 in all China) is naturally the chief importer of raw cotton, taking 84.6 per cent of the total during 1921-1923, inclusive. The next important port was Tientsin, which took 6.7 per cent over the same period. Kiaochow, owing to the large increase in number of spindles during 1923, jumped from about 6 per cent in the two previous years to 10.6 per cent.

The principal factors that have contributed to the establishment and growth of the Chinese cotton-goods industry have been the following: (1) A supply of native-grown cottons of sufficiently good quality for spinning low counts; (2) an enormous domestic demand for the product of the mills, which in the case of yarn by far exceeds that in any other country in the world; (3) low cost of power, which is secured through a good supply of coal from native mines and Japan, and in Shanghai by the unusually low rate charged for electric power generated by the municipality; and (4) an abundance of very cheap labor, which makes the cost of production lower than in any other part of the world and which is not subject to any legal restrictions as to hours of work or age of employees.

The cotton that is consumed in the mills is not of as good quality as American cotton, but it can be used economically for spinning the coarse counts, which are in greatest demand in China. Its low cost gives the mills a marked advantage in the production of heavy sheetings and drills, in which the value of raw material constitutes a large percentage of the total cost.

The finest counts of yarn being spun commercially in China at the present time are 42s. The greatest demand is for 10s to 16s. It is not believed that there will be a tendency for finer counts of yarn in China, such as has been experienced in Japan, for some time to come, owing to the fact that the purchasing power of the people is not sufficient to enable them to purchase higher grades of cloth.

Furthermore, to produce finer counts requires better cotton, and there is no real organized movement yet on foot in China toward better cottons. There are several experimental stations which are doing exceptionally fine work in this way, but the scope of their work is limited by lack of funds. The demand is greater for the lower counts, but there is less competition at present in the finer counts, because there are comparatively few mills equipped to spin the finer yarns. Accordingly it would not be surprising if any new equipment the Japanese put in during the next year or two would be arranged for spinning the finer counts.

Price is the governing factor in the demand for American cotton in China, so far as the average Chinese mills are concerned. The few mills organized and equipped to spin finer counts than the majority of the Chinese mills are, of course, obliged to use American cotton for this finer yarn, regardless of price. As a rough estimate there are approximately 100,000 spindles out of the total number in China that are in this group.

The importation of Indian cotton is almost entirely dependent upon price, with the exception of a very small quantity which is imported on account of its superior quality. The amount of this better grade of Indian cotton is very limited. There are certain grades of Indian cotton which compete in a way with American

staple, but they are very limited and not large enough in quantity to be considered seriously.

Egyptian cotton compares favorably with American cotton on the basis of staple, but the price makes it prohibitive in this market.

Practically all of the American cotton that is used by the Chinese and English owned mills is imported through branch offices of American cotton dealers. At the present time there are three such offices. A certain amount of cotton used by the Japanese mills passes through these offices, but the greater part is imported through Japanese commission houses having direct connections with the New York Cotton Exchange through their New York offices.

There is very little speculation in this market in American cotton either by the Chinese or Japanese. This may be attributed principally to the fact that the local exchange offers easier and cheaper facilities and is recognized by all to be on a sound financial basis. All cotton sold by American dealers is on a basis of cash against delivery, whereas it is customary for the Japanese importers to give the Japanese mills 30 days' credit.

The heavy increase in China's yarn manufacturing capacity has had the natural effect of reducing yarn imports. During 1913-1915 the average importation was 2,695,000 piculs of yarn yearly, of which Japan supplied approximately 50 per cent. As compared with this figure, the average importation during 1921-1923 was approximately 1,065,000 piculs, of which Japan supplied approximately 50 per cent. Following Japan are Hongkong and India, in the order named. Hongkong's contribution consists, to a very large extent, of Indian and Japanese yarns, transshipped there principally for South China ports.

The counts being imported at the present time are mostly 20s to 42s, the cheaper grades coming from India and Japan, while the better grades are supplied by England and the United States. American yarn can not, as a rule, compete in price with the English product, and for this reason the share of the United States in the yarn trade is negligible.

From 1913 to 1915 the demand for higher counts was practically nil, and the United States supplied none, while Great Britain supplied less than 5,000 piculs in any year.

During the years 1921 to 1923 Great Britain is credited with an average of 17,337 piculs per year. The share of the United States, however, averaged but 97 piculs per year over that period.

Imports of cotton yarn are distributed fairly evenly among the various ports of China, although during the past three years Tientsin, being the distributing point for North China, has imported 16 per cent—the greatest individual share—followed by Mengtsz, on the Nansi River in Yunnan Province, which has taken 13 per cent, distributing it through the southwest. Shanghai, being the center of China's cotton-spinning industry, does not figure as a leading port in this trade, ranking seventh in 1923, with total imports of 24,870 piculs valued at 1,826,000 haikwan taels.

Yarn is imported through Japanese, English, Indian, and American importers, mostly for the account of Chinese yarn dealers who have their own distributing organizations throughout China.

The following table shows imports of cotton and cotton yarn from 1912 to 1923, inclusive:

Items	1912	1913	1914	1918	1919	1920	1921	1922	1923
RAW COTTON									
	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>	<i>Piculs</i>
Hongkong.....	31,417	9,081	6,379	25,847	6,217	22,526	30,458	18,961	7,084
French Indo-China.....	2,785	2,133	3,924	4,121	4,766	11,049	10,303	5,476	10,233
British India.....	97,124	83,169	50,766	18,364	98,430	418,964	981,136	1,370,069	1,147,948
Japan (including Formosa).....	14,063	15,214	20,882	128,222	75,029	161,978	141,754	302,895	386,398
Canada.....				1,957	11,453				
United States (including Hawaii).....	141,200	26,310	44,865	11,665	37,199	34,049	516,676	155,319	72,851
All others.....	6,356	3,740	1,086	1,712	8,709	39,930	9,811	5,150	7,730
Gross imports.....	292,945	139,647	127,902	191,888	241,803	688,496	1,690,138	1,857,870	1,632,244
COTTON YARN									
Hongkong.....	708,841	688,644	683,261	373,673	472,040	373,979	324,969	304,928	286,573
British India.....	627,832	656,649	520,145	127,679	435,458	329,637	183,658	68,001	39,025
Japan (including Formosa).....	920,589	1,272,983	1,242,828	666,800	479,228	568,204	575,945	680,017	405,615
All others.....	65,769	81,798	108,040	25,771	30,457	95,355	200,842	165,621	31,918
Gross imports.....	2,323,031	2,700,074	2,554,274	1,193,923	1,417,183	1,367,175	1,285,414	1,218,567	763,131

NOTE.—One picul equivalent to 133½ pounds avoirdupois.

WOOLEN GOODS

An extremely interesting trend in China's piece-goods market is the increasing use of woolens by Chinese, who have begun to show appreciation of the advantages of woolens over padded and fur-lined cotton clothing.

A comparison of the imports of 1913 with those of 1923 is shown in the following table:

Item	1913	1923
Lastings, long ells, camlets, and buntings.....	pieces..... 100,281	23,416
Blankets and rugs.....	pounds..... 1,696,202	500,166
Yarn and cord.....	pounds..... 14,710	32,380
All other.....	yards..... 1,901,888	5,985,451

While the United States has but an extremely small share of this trade, the details of imports of woolen goods for the years 1913 and 1923, which may be of interest to American manufacturers as indicating the growth and present extent of the China market, are shown in the following table:

Item	United States	Great Britain	Hong-kong	Germany	Japan	Total	
1913	<i>Quantity</i>	<i>Quantity</i>	<i>Quantity</i>	<i>Quantity</i>	<i>Quantity</i>	<i>Quantity</i>	<i>Haikwan facts</i>
Blankets and rugs.....pounds.....	253,657	341,961	157,624	34,770	1,696,202	634,872	
Bunting.....pieces.....	1,282	236	4	341	2,003	11,009	
Camlets.....do.....	6,571	9,317			16,286	230,137	
Cloth, broad, medium, habit and russa.....yards.....	20,462	44,563	262,156	9,512	387,884	556,263	
Woolen flannel.....do.....	105	10,032	13,788	13,728	79,487	35,843	
Woolen lastings.....pieces.....	27,016	6,091	2		33,179	407,068	
Long ells.....do.....	22,110	17,076		100	48,813	292,405	
Woolen Spain stripes.....yards.....	122,298	92,372		2,250	241,329	149,930	
Woolen goods, unclassified.....do.....	423,304	181,039	53,199	249,923	1,193,188	1,119,599	
Woolen and worsted yarn and cord.....piculs.....		1,940	1,558	5,490	303	14,710	1,600,783

Item	United States	Great Britain	Hong-kong	Germany	Japan	Total	
1923							
Woolen blankets and rugs pounds.....	Quantity 1,447	Quantity 121,706	Quantity 272,852	Quantity 37,393	Quantity 18,704	Quantity 500,166	Haikwan taels 476,508
Broad and medium habit and russian cloth yards.....		3,159	49,341	75,616	1,136	140,184	388,626
Camlets and bunting pieces.....		3,218	3,740		122	7,107	150,167
Woolen coatings and suitings yards.....	227	2,168,663	514,506	81,872	101,518	3,207,898	7,069,781
Woolen flannel do.....	1,321	15,445	309,642	514	9,122	340,936	340,844
Woolen fastings pieces.....		2,518	3,277			5,810	122,336
Long cells do.....		5,320	4,871			10,499	110,947
Woolen Spain stripes yards.....		4,928	2,896			7,920	8,461
Woolen goods, unenumerated yards.....	1,573	1,673,443	96,098	95,104	259,710	2,288,513	5,442,721
Woolen and worsted yarn and cord piculs.....	8	21,892	1,383	6,798	1,576	32,380	5,317,141

NOTE.—Value of haikwan tael in gold: 1913, \$0.73; 1923, \$0.80. One picul equivalent to 133½ pounds.

Although there is a small market among foreigners and the more wealthy Chinese for high-grade woolen and worsteds for clothing, the principal demand is for the cheaper cloths which are suited for wide distribution in native garments.

Some 15 or 20 Chinese mills of various sizes are in operation, manufacturing both from native and from imported yarn a variety of articles including cloth, blankets, shirts, trousers, scarfs, hosiery, gloves, hats, and sweaters.

Great Britain supplied 70 per cent of direct imports in 1923 but as Great Britain supplied 79 per cent of Hongkong's 1923 imports of these goods it is probable that approximately 79 per cent of the imports from Hongkong are British woollens. Germany supplied approximately 9.6 per cent of the direct imports, and some 13.5 per cent of Hongkong's imports during 1923.

The most of the woolen-goods business is in the hands of British import houses which indent for Chinese dealers, giving 90 to 120 days' credit.

High-grade goods for foreign consumption are purchased by the retail shops through importers and dealers, and also direct from mill on samples furnished by traveling representatives or by mail. Terms in the latter case vary, but well-established Chinese foreign shops buy on 90-day sight draft.

PETROLEUM PRODUCTS

KEROSENE

The importance of America's oil fields in relation to trade with China is fully illustrated by an analysis of China's imports from the United States for the year 1923.

During that year, the gross total of direct imports from the United States to China was valued, according to returns of the Chinese Maritime Customs, at 154,488,000 haikwan taels which, at \$0.80 gold is equivalent to \$123,558,400. Of this, 55,632,000 haikwan taels or \$44,505,600 gold was made up of kerosene oil, gasoline, lubricating oil, and paraffin wax. This, it will be noted, constitutes 36 per cent of the total imports into China from the United States, and is by far the greatest single group in this trade.

In fact, this total is larger than appears by a study of the customs returns, but owing to the impossibility of determining definitely the value of imports from Hongkong and Canada which originated in the United States, it is necessary to adhere to published figures for the purpose of comparison. As an instance of this, it is known that the total imports of American kerosene in 1923 were 182,250,811 gallons, valued at 48,775,567 haikwan taels. The customs, in their analysis of foreign trade, show 159,544,760 gallons valued at 42,231,901 haikwan taels as originating in the United States, the difference being made up by imports from Hongkong, transshipment through Singapore, etc. While in the case of kerosene it is possible to secure actual figures from the customs' "Abstract of Statistics" showing the nature of the oil imported—that is, "American," "Borneo," "Sumatra," etc.—it is not possible in other cases. The figures regarding kerosene are, therefore, accurate, but figures showing imports of other oils



FIG. 3.—Transporting petroleum products to interior Provinces

merely show imports direct from the United States and do not take into consideration the quantities imported through Hongkong.

In view of the fact that mineral oil is not produced in commercial quantities in China, the country's entire requirements of kerosene are imported. Oil is said to exist in good quantities in various portions of the country, but the extreme difficulty of transportation and the unsettled conditions which exist in the interior have militated against the development of these resources by either foreign or Chinese interests. Aside from test drillings in Shensi Province during 1915 and 1916 by a large American oil company, and later efforts by a Japanese firm, little has been done in the way of attempts to establish a domestic source of supply for this important item of China's requirements.

The quantity of kerosene consumed in China each year and the steady growth in the importation of American oil is well illustrated

by the following figures taken from the records of the Chinese Maritime Customs showing imports of kerosene (quantity in 1,000 gallons; value in 1,000 haikwan taels) in periods from 1910 to 1923, inclusive:

From—	1910		1914		1919		1923	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
America.....	96,100	11,496	160,428	23,871	157,294	36,333	179,739	48,017
Borneo.....	19,044	2,822	22,616	3,477	6,491	1,475	5,140	1,405
Burma.....	508	65						
Japan.....	19	4	514	98	651	212	12	4
Russia.....	2,229	637	5,234	1,118			424	140
Sumatra.....	42,780	6,613	36,671	5,868	33,612	8,264	25,246	7,315
Persia.....	710	106			1,440	430		
Other sources.....							4,274	1,411

NOTE.—Value of haikwan tael in United States gold: 1910, \$0.66; 1914, \$0.67; 1919, \$1.39; 1923, \$0.80.

It will be noted that the United States supplied 82.5 per cent of the total value of kerosene imports during 1923 and 83.3 per cent of the quantity, as compared with 52.8 per cent of value and 59.5 per cent of quantity in 1910.

Aside from the naturally expanding demand resulting from the increasing purchasing power in the country, the growth of this business is due almost entirely to the increased distribution which large American and British oil companies are effecting throughout the interior. The use of kerosene in the treaty ports where electric light is available is not a great factor in demand, but it is the interior, where lighting is accomplished by means of kerosene lamps and lanterns, which furnishes the great market, and there consumption is steadily increasing. Aside from increased distribution, probably the greatest factor in the spread of the use of kerosene is the increase in facilities for transportation, enabling oil to reach sections of the country hitherto inaccessible, and it is certain that as transportation facilities improve, the use of kerosene will increase. The substitution of kerosene for candles, tallow dips, and other native means of lighting is proceeding rapidly in territory opened up by the oil companies, and the popularity of kerosene is likewise heightened by the introduction of lamps, lanterns, and other oil-burning devices, by the oil companies and by importers of these various devices.

It is interesting to note the value which is attached to empty oil tins in China, and the various uses to which they are put. Cut into quarters and made into dustpans a tin will bring 60 cents to \$1 silver; made into a small suitcase, \$1.50 to \$2.50 silver; painted various colors they may be seen suspended from signal poles and used as signals for river craft. New tins are cut carefully and the tin sheets sold to shops making various tin articles. Dealers also derive a profit from the sale of the wooden cases.

Many factors affect the sale of kerosene, among the most important of which are crops and crop prices; silver exchange and local exchanges against Shanghai and other import centers; local military disturbances; water levels in the creeks and canals through which

shipments must pass; and the supply, export demand, and price of vegetable oils which may be used for dip lights.

The increasing use of electric light throughout China, while not keenly felt at present, constitutes a growing factor in the lighting field which will naturally affect oil sales.

Approximately 85 per cent of the kerosene trade of China is controlled by two organizations—one large American company, selling American oil exclusively, and one large British company which, while acting as sales agents for Dutch and other producers, sells American oil to the extent of approximately 60 per cent of its total China sales.

These companies bring their oil in bulk in their own tank steamers and store it in tanks at seaports. From these points it is distributed by tank barges to other distributing points on navigable rivers, where other storage tanks are maintained. Tank cars, tank lighters and steamers, storage tanks, and other equipment are owned by the companies.

At various points from which distribution can be effected at minimum cost, plants for the manufacture of tins and cases are operated. Using Chinese labor, importing tin plate, and buying lumber in quantities, these companies are able to case their own oil for further distribution as case goods at prices which are extremely difficult to meet with oil imported in cases from America or elsewhere.

One American company, handling probably 10 per cent of the kerosene trade, import all their goods in cases, and distribute from godowns located at advantageous distributing centers.

Independent oil companies, when prices in China are such as to permit the importation of case goods at a profit, indent kerosene from the United States against orders from Chinese dealers. In the majority of cases these dealers are located in treaty ports, and either sell locally or resell to agents in other localities. These dealers buy at a stipulated price, which must be such as to allow them the same commission as they would make in buying from the large factors in the trade.

The success of the companies controlling the kerosene trade is due primarily to their very excellent and far-reaching system of distribution throughout China, which has been built up at the expense of painstaking study of conditions in each separate locality; heavy outlay in time and money; the gathering together and continual augmenting of a personnel of trained men; intensive, thorough, and continuous effort to reduce transportation costs to an absolute minimum; and constant advertising and introductory work, both through the usual advertising channels and by the introduction of oil-burning devices of various descriptions.

These companies maintain a network of Chinese agents throughout the country. To these agents, who are bonded for appropriate amounts, oil is consigned. The proceeds of sales are remitted by the agents, less commissions and fixed allowances for godown expenses, etc. The goods remain the property of the foreign company until payment is received by them. This system has many advantages, one of the greatest in recent years being the comparative safety of the goods, owing to the hesitancy of bandits and military authorities to interfere with foreign property.

FUEL OIL

The heavy increase in the demand for fuel oils in China which has taken place in the past 10 years, is due in a large measure to the increased use of fuel oil by ships. The greatest growth has been in the use of bunker oil but there has also been a heavy and continuous growth in the use of ships operated by Diesel oil-burning engines, and this demand promises to continue its already heavy increase.

The quantity thus used is indicated by the figures of reexports shown in the table of imports given below. In addition to its use on ships, a fair quantity of fuel oil is being used in China for operating various types of work engines. The continuous growth of this trade is expected with the progress of industrialization.

As indicated by the following table of imports (1913, 1918, 1921, and 1923), prior to 1918 the greater part of the liquid fuel was imported from the Dutch East Indies and Straits Settlements. This was due in part to the fact that American companies had no storage facilities for fuel oil which would enable them to bring in their oil in such quantities as to compete with the product of near-by producing countries.

Since 1918, through the changing over from coal-burning to oil-burning vessels, a demand has grown for heavy oil, such as California produces. The consumption of these heavy oils has increased greatly and both American and British companies are obtaining supplies from the United States.

The imports of fuel oil, and countries from which imported, are shown in the following table:

Countries	1913		1918		1921		1923	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	<i>Tons</i>	<i>Haikwan taels</i>	<i>Tons</i>	<i>Haikwan taels</i>	<i>Tons</i>	<i>Haikwan taels</i>	<i>Tons</i>	<i>Haikwan taels</i>
Hongkong.....	1, 378	25, 822	10, 220	212, 119	17, 066	629, 460	9, 940	213, 629
Straits Settlements...	6, 989	57, 735	19, 269	305, 900	714	16, 680	19, 584	468, 496
Dutch East Indies....	12, 813	104, 179	2, 597	42, 751	21, 279	456, 135	14, 088	316, 946
Japan (including Formosa)			30	487	3	51		
United States (in- cluding Hawaii)	83	12, 608	43	5, 342	32, 755	668, 425	45, 666	1, 237, 377
Australia and New Zealand			2, 825	39, 099				
Macao							46	973
Gross imports.....	21, 263	200, 344	34, 984	605, 698	71, 817	1, 770, 751	89, 324	2, 237, 421
Reexports.....	9, 198	75, 240	16, 780	267, 473	31, 256	649, 992	32, 057	768, 385
Net imports.....	12, 065	125, 104	18, 204	338, 225	40, 561	1, 120, 759	57, 267	1, 469, 036

Fuel oil is imported in bulk, stored in tanks at important points, and distributed in drums to the inland trade. That for sale to ocean-going vessels is imported with a duty drawback, against which duty is refunded.

Shanghai is the principal port of importation, followed by Hankow, Hongkong, and Kiukiang, in the order named. Hankow is increasing in importance as a port of importation, owing to the increasing use of fuel oil in the boats plying the Yangtze River

and also on account of the increased use in various industries which can be supplied from Hankow.

GASOLINE

The increasing use in China of motor cars and trucks, during the past 10 years, has resulted in the steady and rapid growth of the gasoline trade. Total imports in 1914 were 823,000 gallons, valued at 215,000 haikwan taels; in 1923 imports had risen to 6,325,000 gallons valued at 3,890,000 haikwan taels.

The position of the United States in this trade has varied, but its average share of the total imports has been 28 per cent over the 10-year period from 1914 to 1923 inclusive. The gross imports of gasoline, benzine, naphtha, petrol, etc., into all of China, and countries from which imported (value in thousands of haikwan taels, quantity in thousands of gallons) are shown in the following table:

Imported from—	1914		1917		1920		1923	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Hongkong.....	55	16	37	18	147	72	282	164
Singapore, Straits Settlements.....	431	94	579	197	462	277	1,026	565
Netherlands Indies.....	1	—	99	34	705	420	2,826	1,590
Russia and Siberia by land frontier.....	5	2	3	1	77	116	3	1
Russia, Amur ports.....	1	—	—	—	1	1	1	1
Russia Pacific ports.....	5	4	2	1	53	38	13	12
Chosen.....	1	—	3	2	1	1	2	2
Japan (including Taiwan).....	25	8	241	161	640	416	249	204
United States (including Hawaii).....	298	89	199	133	508	385	1,933	1,544
Philippines.....	—	—	31	11	—	—	—	—
French Indo-China.....	—	—	—	—	2	1	6	5
Macao.....	—	—	—	—	—	—	1	—
Great Britain.....	—	—	—	—	—	—	3	3
Total.....	821	213	1,194	558	2,656	1,727	6,365	3,891

It is estimated that 50 per cent of the imports from Hongkong are American gasoline, increasing the share of the United States in that proportion.

Gasoline imported from the Netherlands East Indies, Singapore, and Straits Settlements, is handled by a large British company acting as selling agents for The Royal Dutch Shell Co. Owing to proximity to the market, they are in a position to do the largest share of the trade as the foregoing figures illustrate.

Gasoline is imported from the United States in drums and tins ranging in capacity from 5 to 50 gallons. From Sumatra and Java it is brought in by tank steamers, stored in bulk, and tinned locally.

Case goods and cargo in drums are usually stored in "dangerous cargo" warehouses at treaty ports, or in the godowns of the importing companies, and distribution is effected from the principal ports of importation, either by the vessels of the importer or by coastwise and river boats operated by various steamship companies.

The bulk of the gasoline trade is done direct between the importing oil companies and large users and retailers such as garages and hire-car operators.

A great majority of the automobiles being located in treaty ports, where conditions closely resemble those obtaining in the United States, distribution and advertising are carried out along almost identical lines. Advertising in the daily press, distribution of calendars and other novelties are among the many advertising methods used.

Filling stations are maintained at garages, and also by individual oil companies, prices being the same at either. Visible pumps are in general use at filling stations.

Automobiles are the greatest, and practically the only users of gasoline in China. The quantity used in motor boats and stationary engines is small, and generally confined to use for starting only, as kerosene and fuel oil are far cheaper. Such engines are practically all equipped with kerosene carburetors.

The growth of the gasoline trade depends at present on the progress of good roads in China and on further development of the use of automobiles.

LUBRICATING OIL

The industrial development of China has brought with it an increasing demand for lubricating oils, and the United States has steadily improved its position in this trade. The imports of lubricating oils into all of China (quantity in thousands of gallons, value in thousands of haikwan taels) are shown in the following table:

Imported from—	1911		1914		1919		1923	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Hongkong.....	145	47	324	99	674	220	646	343
French Indo-China.....	2	1	8	4	16	7	25	16
Singapore, Straits Settlements, etc.....	178	49	64	22	354	99	55	20
Netherlands Indies.....	11	3	5	1	188	54	260	115
Great Britain.....	46	21	32	16	18	9	23	25
Germany.....	169	57	15	7	.....	.....	5	8
Netherlands.....	13	4	.....	.....	.....	.....	.....	.....
Belgium.....	187	60	169	50	.....	.....	.....	.....
France.....	53	15	.....	1	.....	.....	.....	.....
Austria and Hungary.....	102	30	17	5	.....	.....	.....	.....
Russia and Siberia by land frontier.....	22	6	95	55	10	2	2	2
Russia, Amur ports.....	.....	.....	2	.....	.....	.....	.....	.....
Russia, Pacific ports.....	215	69	212	104	166	57	7	5
Chosen.....	43	12	5	1	10	5	23	11
Japan (including Taiwan).....	382	111	410	123	935	383	635	299
Philippines.....	1	.....	.....	.....	.....	.....	10	8
United States (including Hawaii).....	716	175	1,861	514	5,398	1,936	6,042	2,530
Canada.....	.....	.....	.....	.....	103	60	.....	.....
Siam.....	.....	.....	.....	.....	.....	.....	1	.....
Macao.....	.....	.....	.....	.....	.....	.....	1	.....
Australia, New Zealand, etc.....	.....	.....	.....	.....	.....	.....	1	1

NOTE.—Value of haikwan tael in gold: 1911, \$0.65; in 1914, \$0.67; in 1919, \$1.39; in 1923, \$0.80.

The increasing demand is due primarily to the growth of industries using modern machinery (spinning mills, flour mills, electric light and power plants, oil mills, cement plants), and the increasing use of automotive, railway, and street-car transportation, and motor boats.

It is estimated that motor oils constituted approximately 8 per cent of the imports of lubricating oil in 1923, while the remainder, 92 per cent, was for industrial purposes.

Approximately 80 per cent of the business in lubricating oil is in the hands of three large American firms, about 10 per cent is done by an old-established British company, and the rest is handled by a few firms of Chinese dealers who import direct and also buy from the various independent oil companies. The large foreign companies sell direct to consumers in the majority of cases, having well-established distributing facilities. They hold stocks at all important points, and deliver to customers either ex godown or at the buyer's plant.

The Chinese importing firms are few in number and handle but 10 per cent (approximately) of the business, but it is to these dealers that the independent oil companies operating in China endeavor to sell, as they have well-established agent organizations in important consuming centers. The independent companies must rely on these dealers to effect their distribution, as the building up of an independent distribution organization is difficult and requires heavy expenditures in both time and money to perfect.

Motor oil is delivered to garages maintaining filling stations and is sold by these garages, as in other countries. Filling stations are also maintained by the oil companies independently of the garages, prices being the same at either.

The advertising of lubricating oil is carried on through the usual channels such as foreign and Chinese newspapers and periodicals, billboards, and mail campaigns.

As most of the motor oil is used in the foreign concessions where practically the same conditions apply as in the United States, advertising methods are practically the same. Illuminated signs on garages, and the distribution of literature being among the many used to create a consumer demand.

PARAFFIN WAX

The manufacture of matches and candles in China has made good progress during the past few years, and paraffin wax is being imported in increasing quantities. In 1913 imports totaled 137,845 piculs, valued at 1,176,895 haikwan taels. By 1921 these amounts had increased to 266,728 piculs and 2,901,357 haikwan taels, and 1923 imports were 519,087 piculs valued at 4,118,351 haikwan taels.

The United States has supplied 42.5 per cent of China's total imports over the past 10 years, not including that reaching China through Hongkong. The share of the United States in 1923 in direct imports was 44.8 per cent or 232,815 piculs valued at 1,744,903 haikwan taels.

Other suppliers are the Malay States, Netherlands East Indies, and British India, and a small amount also arrives from Japan and Great Britain. Hongkong is second to the United States as a source of imports, but her supplies are derived from the above countries and reach China as transshipped cargo.

Paraffin wax is imported and used by large American and British oil companies in their candle-manufacturing plants, and is sold by them to other candle makers and match factories. According to recently published statistics there are approximately 40 soap and candle factories in China, but owing to the lack of details regarding

them, it is impossible to say whether they are equipped with modern machinery for making wax candles or are making native tallow candles. It is likewise impossible to procure statistics as to the quantity of candles manufactured in China. It is known that China consumes a great number each year, but what proportion of these are wax and what portion are native-made tallow candles, is not known.

In addition to domestic makes, candles are imported from abroad in varying quantities, the majority coming from the Netherlands Indies. In the years 1918 to 1923, inclusive, the average importation of candles of all kinds was 67,800 piculs a year.

An indication of increased candle manufacturing in China may be had from the import statistics on candlewick, which has increased from 153 piculs in 1918 to 551 piculs and 656 piculs in 1922 and 1923, respectively.

The manufacture of matches also consumes an increasing quantity of wax. There are at present about 125 match factories in China, and while statistics are not available, the increasing domestic output can be judged from the decrease in imports, which have fallen steadily from over 28,000,000 gross in 1913, to 2,241,000 gross in 1923.

HARDWARE

MARKET FEATURES

In approaching the China market American manufacturers should appreciate the following three outstanding facts which apply with particular force to small items such as hardware:

1. China is a market of great aggregate purchasing power, but the individual purchasing power of the great mass of the population is extremely low.

2. The Chinese are an extremely conservative people, and the introduction of goods bearing a new or hitherto unknown chop or trade-mark is a slow process. However, once known and found to stand for excellence and value, a trade-mark is of the utmost value, as the very conservatism which makes the Chinese slow to adopt the new tends to make them extremely loyal customers.

3. It is necessary to adapt business methods to the established customs of the country, and to study the market and its requirements thoroughly from all angles before attempting to supply its wants.

In general the market for imported hardware is very limited. The Chinese use tools, cooking utensils, stoves, brushes, and cutlery of their own design and make, and imported articles can be sold only to foreigners in China and to a few Chinese living and working in foreign or semiforeign style. The market is gradually broadening, but no great quantities are sold.

Enameled ware and articles of tin and aluminum, made especially to suit Chinese uses—or adaptable to these uses—are finding an increasing market, but in general are subject to the limitations of the low individual purchasing power of the bulk of the population.

Lamps and lanterns burning kerosene, having been well introduced by the large oil companies, find a good market, and both the imported and domestic articles are used practically throughout the country.

The use of building hardware and locks of all descriptions is increasing under the stimulus of the steady increase in foreign-style building, the increasing use of foreign-style furniture among the Chinese, and the growing manufacture of foreign-style trunks, bags, safes, cabinets, and office furniture.

GENERAL IMPORT METHODS

Probably 90 per cent of China's imports of hardware is sold through import houses acting as commission agents. These houses indent to fill orders as received from Chinese dealers, but at times order for stock some articles which are well established on the market and which enjoy a regular turnover.

When the dealer's order is received, the importer places his order with the manufacturer. When shipment is made the dealer is notified in order that he may settle his exchange, and is again notified some 10 days prior to the arrival of the cargo in Shanghai.

The importer settles his own exchange and usually takes up documents from the bank on trust receipts, paying the bank when the dealer takes delivery. Delivery is usually made against cash.

Hardware is usually sold f. o. b. port of shipment, plus 2½ per cent commission; plus ocean freight, marine insurance, duty, handling charges, and all other costs except storage, which is for importer's account.

Shanghai hardware dealers, as a class, are in good standing with the import houses. It is said that they order conservatively, make three or four turnovers a year under ordinary circumstances, and are not prone to speculation in merchandise, although a certain amount of speculation in the matter of fixing exchange is to be expected. As a rule they take delivery of cargo promptly and are quite satisfactory to deal with.

COMPETITION

British.—American and British methods of importation, sale, and distribution are practically identical, and the principal advantage which British manufacturers have over American is the fact that many of their chops or trade-marks are better known in China owing to having been longer in the market.

In some lines British prices are higher than American, yet the American goods are equal in excellence but have a trade-mark less widely known in China.

German.—German prices, which are quoted in sterling and in gold, are nearly equal to American or British prices, although the quality of German cargo is not up to the standard of either.

In order to keep in the market German houses are giving 30 to 60 days' credit; taking postdated native bank orders in payment as against the "cash on delivery" terms of the British and American importers. This practice, together with the fact that they are putting on the market goods designed for Chinese use, is said to be the main factor at present assisting their sales.

Japanese.—The Japanese are close to the market, give quicker delivery than any of their competitors, and have a good hold on interior markets in certain lines, such as aluminum ware and enam-

eled ware, as their prices are cheapest and the individual purchasing power of the customers in the interior is extremely low.

Terms of 30 to 60 days are also given by the Japanese. They likewise endeavor to manufacture goods to suit the market. Local Chinese dealers state that although their cheapness appeals, Japanese goods are inferior in quality to German.

CLASSES IMPORTED

In dealing with hardware it is unfortunate that more detailed import statistics are not available for all China. The yearly analysis of China's import trade published by the Chinese Maritime Customs shows in detail only the following classes of hardware: Cutlery and electroplated ware, enameled ware, lamps and lamp ware, stoves and grates.

Total value of imports into all China under these headings was as follows during the year shown (value in haikwan taels):

Articles and countries	1913	1918	1921	1923
Cutlery and electroplated ware:				
Hongkong.....	27,058	17,991	24,063	31,079
Macao.....	88	9	49	13
French Indo-China.....	4,813	509	832	10,574
Siam.....	7	42	117	1,933
Singapore, Straits Settlements, etc.....	272			667
Netherlands Indies.....				
British India.....	7,258	623	1,189	5,388
Great Britain.....	73,863	51,173	138,296	95,068
Norway.....				215
Sweden.....	60		2,530	289
Denmark.....			489	611
Germany.....	72,112		53,211	125,234
Netherlands.....	63		39,746	7,075
Belgium.....	21,105		1,634	586
France.....	1,884	27	9,343	992
Switzerland.....				400
Italy.....	74	631		732
Austria and Hungary.....	20			750
Russia and Siberia.....	7,420			326
Russia, Pacific ports.....	4,212	120	29,563	1,239
Chosen.....	796	520	1,904	1,023
Japan (including Taiwan).....	37,233	92,929	106,678	125,644
Philippine Islands.....	7	236	336	71
Canada.....	1,502	3,712	3,730	291
United States (including Hawaii).....	11,684	48,162	67,575	112,302
Gross imports.....	272,531	216,684	481,285	523,502
Reexports.....	5,963	243,238	16,608	11,789
Net imports.....	266,568		464,677	511,713
Enameled ware:				
Switzerland.....			3,100	
Hongkong.....	168,024	196,208	154,541	218,700
Macao.....	458	51	90	57
French Indo-China.....	10,516	3,808	1,201	829
Siam.....	22			
Singapore, Straits Settlements, etc.....	6,318		816	13,931
British India.....	3,850	1,525	1,956	679
Great Britain.....	29,257	6,835	56,245	21,418
Sweden.....	332		3,330	
Denmark.....	2,128			176
Germany.....	127,476		43,945	88,209
Netherlands.....	9,000			1,004
Belgium.....	12,327		554	52
France.....	1,283		29	1,866
Italy.....	7		4,564	15,074
Austria and Hungary.....	691,138			76
Russia and Siberia.....	17,053	29	10	40
Russia, Amur ports.....	77	87		
Russia, Pacific ports.....	10,256	398	3,760	3,406
Chosen.....	806	3,933	6,750	17,617
Japan (including Taiwan).....	60,087	884,178	813,861	836,998

Articles and countries	1913	1918	1921	1923
Enameled ware—Continued.				
Philippine Islands.....	117		4,306	105
United States (including Hawaii).....	3,373	23,675	59,249	37,076
Canada.....		2,221	169	217
Gross imports.....	1,153,935	1,122,948	1,158,483	1,257,521
Reexports.....	5,540	16,416	29,440	6,865
Net imports.....	1,148,395	1,106,532	1,129,043	1,250,656
Lamps and lamp ware:				
Hongkong.....	251,255	143,096	239,951	349,798
Macao.....	1,279	473	1,420	668
French Indo-China.....	30,891	9,931	37,958	39,251
Siam.....	150			
Singapore, Straits Settlements, etc.....	3,644		2,665	240
British India.....	2,607	1,841		5,106
Turkey, Persia, Egypt, Aden, Algeria, etc.....	50			94
Great Britain.....	76,195	9,719	68,607	38,382
Sweden.....	24,915		13,620	74
Denmark.....	247		5,588	1,501
Germany.....	370,679		324,994	610,548
Netherlands.....	713		2,871	24,258
Belgium.....	23,415		10,536	12,185
France.....	2,165		2,488	905
Italy.....	84			2,775
Austria and Hungary.....	31,739			392
Russia and Siberia.....	22,036	39		
Russia, Amur ports.....	217	3	220	
Russia, Pacific ports.....	4,744	1,013	6,469	1,518
Chosen.....	1,833	3,641	7,267	8,988
Japan (including Taiwan).....	436,056	371,917	384,527	343,996
Philippines.....	141	63	267	356
Canada.....		32,494	10,421	3,887
United States (including Hawaii).....	83,770	112,219	338,725	230,475
Australia, New Zealand, etc.....				
Netherlands Indies.....			132	74
Gross imports.....	1,368,825	686,449	1,458,726	1,675,471
Reexports.....	12,402	6,122	85,049	20,045
Net imports.....	1,356,423	680,327	1,373,677	1,655,426
Stoves and grates:				
Hongkong.....	5,518	3,881	12,256	15,970
Macao.....		25	183	91
French Indo-China.....		102	467	1,118
Singapore, Straits Settlements, etc.....	96		13	188
British India.....	67			
Great Britain.....	38,589	10,890	165,288	85,962
Sweden.....	14,238		4,596	9,420
Denmark.....			431	1,036
Germany.....	163,862		88,591	145,200
Netherlands.....	4,158		10	
Belgium.....	21,308		19,127	1,766
France.....	535		8,794	9,876
Italy.....	208		170	4,649
Austria and Hungary.....	2,407			5,587
Russia and Siberia.....	2,748		12	17
Russia, Pacific ports.....	10,120	8	34	200
Chosen.....	289	761	2,390	9,751
Japan (including Taiwan).....	19,617	22,349	20,779	11,450
Philippine Islands.....	12		25,020	
Canada.....	237	3,006	16,530	852
United States (including Hawaii).....	26,490	46,399	228,762	166,490
Australia, New Zealand.....	28			
Netherlands Indies.....				600
Gross imports.....	312,527	87,421	593,513	470,223
Reexports.....	4,415	3,320	10,603	13,834
Net imports.....	311,112	84,101	582,910	456,389

Items not included under these headings are lumped under the two headings: Sundries, unenumerated; stores, household.

There is reason to believe that a small amount of cutlery, flash-lights, electroplated ware, and miscellaneous small items come in by parcel post, and are listed under the general heading "Postal parcels, not otherwise classified."

While it is impossible to segregate items from these general classifications, it is of interest to note the increases in value, during the past 10 years, of goods coming under these headings, as illustrated by the following tables taken from the Chinese Maritime Customs returns of trade for the years shown (value in haikwan taels):

Imported from—	Sundries, unenumerated		Household stores			Postal parcels, not otherwise classified		
	1918	1923	1913	1918	1923	1913	1918	1923
United States.....	314, 603	1, 050, 319	181, 443	369, 427	1, 171, 284	41, 486	466, 677	2, 157, 235
Great Britain.....	266, 716	875, 789	287, 127	129, 793	518, 790	290, 859	331, 536	794, 330
Japan.....	2, 223, 189	4, 933, 080	391, 925	833, 833	1, 119, 749	297, 164	1, 991, 375	2, 289, 448
Germany.....	.....	557, 450	188, 113	.....	66, 631	273, 508	.....	325, 554
Hongkong.....	1, 095, 897	3, 631, 028	359, 217	379, 957	660, 649	112, 121	284, 323	392, 070
Others.....	435, 822	1, 731, 255	2, 512, 733	256, 012	893, 722	1, 398, 823	283, 301	1, 059, 374
Total.....	4, 356, 227	12, 777, 921	3, 920, 558	1, 969, 022	4, 430, 825	2, 413, 961	3, 357, 212	7, 018, 011

NOTE.—Value of haikwan tael in gold, 1913, \$0.73; 1918, \$1.26; 1923, \$0.80.

The customs records at the port of Shanghai give more detailed figures, and as Shanghai imports an average of 50 per cent of the hardware brought into China, the following figures showing 1923 imports (value in haikwan taels) into Shanghai will be of interest:

Stoves and grates.....	392, 968
Locks and padlocks.....	323, 239
Lamps and lamp ware.....	122, 553
Enameled ware:	
Basins over 11 centimeters but not over 22 centimeters in diameter.....	837
Basins over 22 centimeters but not over 36 centimeters in diameter.....	335, 191
Basins, other sizes.....	18, 339
Bathtubs.....	38, 736
Bowls, cups, and mugs not over 11 centimeters in diameter.....	4, 607
Bowls, cups, and mugs, other sizes.....	324
Enameled ware unclassified.....	96, 087
Filters and parts of.....	50, 290
Ice freezers and refrigerators.....	36, 043
Brushes:	
Clothing.....	3, 400
Tooth and nail.....	44, 147
Unclassified.....	28, 545
Cutlery.....	182, 574
Electroplated ware.....	58, 448
Hair clippers.....	5, 416
Razors, including blades and strops.....	34, 847
Scissors.....	6, 518

MACHINERY AND MACHINE TOOLS

The advances which China has made in the establishing of modern industries during the past 20 years, in spite of the numerous handicaps to which this process of industrialization is subjected, speaks for the potentialities existing in the country's great natural resources, and indicates a wide and developing market for manufactured products among China's enormous population of industrious, thrifty, and intelligent people, whose purchasing power, while low individually, is large in the aggregate.

Illustrating the amount of machinery being absorbed by China, the following table of the value (in haikwan taels) of imports of all classes of machinery into China from 1913 to 1923 will be interesting:

Year	Machine tools		Agricultural machinery		Propelling machinery		Textile machinery	
	Total	From United States and Canada	Total	From United States and Canada	Total	From United States and Canada	Total	From United States and Canada
1913.....	51,288	3,773	113,077	12,553	658,349	43,964	839,724	2,615
1914.....	97,616	11,001	334,279	937	1,047,003	64,637	2,050,646	2,530
1915.....	72,811	15,494	161,563	13,210	710,887	126,157	1,419,511	15,700
1916.....	97,778	23,403	207,957	164,268	606,148	134,477	1,934,131	115,431
1917.....	208,394	40,983	110,969	46,819	508,258	140,540	1,235,800	218,928
1918.....	349,108	145,571	167,506	106,173	737,463	421,957	1,714,994	379,967
1919.....	499,853	197,859	524,739	468,405	1,640,303	907,715	3,767,406	1,944,350
1920.....	761,073	305,780	1,023,570	832,300	2,376,122	795,605	6,927,728	3,897,204
1921.....	940,337	277,827	2,199,142	1,671,730	5,163,781	1,051,333	26,792,072	11,768,212
1922.....	657,832	85,823	768,857	544,336	2,492,730	330,947	30,529,286	7,910,042
1923.....	191,987	88,935	349,055	105,954	1,541,618	348,277	12,334,417	933,533

Year	Brewing, distilling, etc., machinery		Embroidering, knitting, and sewing machinery		Other kinds		Total, all classes		Per cent supplied by United States and Canada
	Total	From United States and Canada	Total	From United States and Canada	Total	From United States and Canada	All countries	From United States and Canada	
1913.....	49,108	3,400	915,898	139,513	5,538,579	363,195	8,166,023	569,013	7.0
1914.....	25,301	1,007	600,243	42,389	5,106,952	601,995	9,262,040	724,496	7.0
1915.....	24,774	-----	600,253	6,940	2,257,884	573,801	4,953,683	751,302	15.8
1916.....	11,517	390	316,243	25,486	3,481,674	804,829	6,655,448	1,268,284	19.2
1917.....	87,332	1,312	446,424	238,789	3,942,941	1,009,378	6,540,118	1,696,749	25.1
1918.....	19,352	-----	311,228	150,206	5,019,367	1,442,907	8,339,024	2,646,711	31.9
1919.....	3,271	75	628,840	383,736	8,417,416	3,357,728	15,481,828	7,259,868	46.7
1920.....	27,688	10,060	1,048,596	558,035	12,413,643	1,172,733	24,608,420	7,571,717	30.9
1921.....	634,973	58,036	707,170	283,848	21,367,427	8,043,992	57,804,902	23,154,978	40.8
1922.....	268,809	58,016	907,643	177,660	15,915,486	3,250,961	51,540,643	12,357,285	24.1
1923.....	103,188	86,580	881,774	118,386	12,909,299	2,895,585	28,611,338	4,577,250	16.0

NOTE.—Value of haikwan tael in gold: 1913, \$0.75; 1914, \$0.67; 1915, \$0.62; 1916, \$0.79; 1917, \$1.03; 1918, \$1.26; 1919, \$1.39; 1920, \$0.76; 1921, \$0.76; 1922, \$0.83; 1923, \$0.80.

The development and expansion of industrial enterprises in China has been particularly difficult during the past three years, owing to conditions which have caused the exercise of extreme care in the matter of capital investments outside of the treaty ports. Compared with import figures during the period of rising machinery importation occurring between 1916 and 1921, those for 1922 to 1924 show marked declines, but a comparison of 1923 figures with those for the year 1913 will serve to indicate the real growth of the trade during the 10 years intervening.

This is particularly true when it is considered that the year 1923 saw very few new enterprises started, but was a year of settling up and completing deliveries on old contracts, and that the business done during that year will be materially improved upon with the natural growth of demand for the manufactured products of China's factories, even though conditions continue in their present unsettled state.

The most noticeable feature of the general engineering and machinery business in China during 1923 and 1924 was the fact that a very large number of foreign firms which, during the boom period, added machinery departments to their establishments are dropping out of this trade and closing out the departments.

Of the general trading firms which, during the boom, added engineering departments to their general business and sold machinery on the same basis as they were selling indent goods, many have learned through practical experience that this way of conducting an extensive machinery business in China is neither feasible nor profitable.

In only very few instances do Chinese industrial concerns or machinery buyers know exactly what they wish to buy. It is therefore left in the hands of the selling firms to supply the technical information necessary to close the business. The Chinese are still averse to paying consulting engineers for drawing up specifications, and this part of the work must be performed free of charge by the selling firms. This necessitates the employment of well-qualified men in the lines dealt with, and consequently entails a heavy expense. It also means that a sale is not finished when the contract is signed. The firms which are handling this trade are really responsible, for every practical reason, for the proper operation of the plants and machinery which they sell to their Chinese customers.

Although most of the big machinery sales are made on a c. i. f. basis, the firm which sells the machinery usually undertakes to install it, and in the majority of cases the Chinese customer does not consider that he has had good delivery until the machinery delivered to him is operating satisfactorily.

Owing to the comparatively limited business in any special line of machinery and the heavy expense in conducting such business, it is not yet possible for any one firm to specialize in any one kind of machinery and at the same time make a successful trading establishment in China.

For example, an electric manufacturer dealing in electrical material only would find that a very large number of orders in connection with combined plants would not come within his reach at all, as the Chinese are not, as a rule, prepared to split their orders for a combined plant between several firms, but prefer to buy the whole plant from one firm which they can hold responsible for the completeness and operation of the plant.

While a certain amount of business in small machinery can naturally be done by nonspecializing import houses, it is felt that the bulk of the big business, consisting as it does of combined selling and engineering, will be effected through houses properly equipped to handle both ends of the work to the satisfaction of both the Chinese customers and the manufacturer who is looking to his agent for thorough representation.

MACHINE TOOLS

While the total volume of machine tools imported into China is not large when compared with the imports of an industrialized nation, it must be remembered that China is still in the stage of handcraft, and the growth of the market for machine tools must depend to

a large extent upon the progress made in the installation of modern mills, factories, etc., and the growth of the necessity for mass production which at present is practically absent in China.

Machine tools are sold in China for use in railroad and shipbuilding establishments, repair shops of mills and factories, and machine shops making a variety of articles. The last named is confined mainly to small tools.

The railways of China, normally the largest individual purchasers of machine tools, have not been in a position for the past few years to purchase the amount of equipment which they would have purchased had their financial condition been more satisfactory. Shipbuilding activities have fallen off considerably, and shipyards, which were good customers for machine tools during normal operation, have done little local buying during the past two years. A majority of the purchases of the foreign owned and operated shipyards in Shanghai and Hongkong are made through home purchasing agents.

Small installations for light manufacturing purposes are becoming more frequent, and sales of small tools of various sorts are progressing fairly well in spite of the absence of buying by the usual large purchasers.

The growth of the machine-tool trade from 51,000 haikwan taels in 1913 to 500,000 haikwan taels in 1923 represents a steadier expansion in the use of machine tools than the rather erratic import figures show. In 1920, 761,000, in 1921 some 940,000, and in 1922 approximately 660,000 haikwan taels' worth of machine tools were imported, while in 1923 imports had dropped to 492,000 haikwan taels. Considering these figures, it must be borne in mind that heavy over-buying took place both in 1920 and in 1921. While imports are shown to have fallen off during 1922 and 1923, there was a good deal of material going into consumption from stocks which had accumulated during the three previous years, which is naturally not shown as imports.

It is believed that the various arsenals in China have absorbed a considerable quantity of machine tools during the past few years, but of this business American and British firms are deprived, as a result of agreements preventing the sale of materials to Chinese governmental or provincial authorities for use in the manufacture of arms or ammunition.

During the war Japan obtained a large share of the machine-tool trade, but with the reentry of Great Britain and Germany into the market, Japan's share has fallen off, until in 1923 it was reduced to but 11.8 per cent, from a 1917 record of 77 per cent.

The United Kingdom, practically out of the market from 1914 to 1920, reached 31 per cent of the total during 1921, while the United States declined from 40 per cent in 1920 to 29.5 per cent in 1921. All countries, with the exception of Germany, show declines from 1921 to 1923, while Germany, which was absolutely out of the market from 1915 to 1920, increased its share of the machine-tool trade from 3.6 per cent in 1921 to 44.5 per cent in 1923. This increase was due almost entirely to the fact that prices of German tools in this market were from 20 to 40 per cent below all competition, and that importers of German tools were making terms which it was impossible for competitors to meet.

AGRICULTURAL MACHINERY

Conditions obtaining in Chinese agriculture do not permit the sale of any great quantity of American agricultural machinery.

While possibly 80 per cent of China's population is engaged in farming, individual holdings are extremely small, purchasing power is low, native tools are cheap and efficient, and labor is cheap and plentiful. While a considerable quantity of agricultural machinery of various sorts, from tractors to light plows, has been imported, the bulk of the large equipment has been for experimental purposes.

There are constant imports of items under the customs heading "Machinery, agricultural," but their small volume may be judged from the import figures previously quoted. A considerable portion of these imports is made up of rice-hulling machines. Japan turns out a low-priced rice machine which sells well in this market.

The comparatively high figures for 1920 and 1921 are accounted for mainly by fairly large experimental purchases and large imports for stock, some of which are still unsold.

Good work is being done by educational institutions which are making efforts to introduce American agricultural machinery to the Chinese.

In the opinion of importers, the best opportunities lie in such items as small rice-hulling machines to operate by kerosene engine, irrigating hand pumps, walking harrows, walking cultivators, walking plows, and various other items which may be used in connection with hand labor or animal power, and which are designed to meet the peculiar requirements of the Chinese farmer.

FLOUR-MILLING MACHINERY

The present modern flour-milling industry of China, represented by approximately 160 mills with a daily capacity estimated at nearly 270,000 50-pound bags, has been but 25 years in the making.

Prior to 1900 the flour produced in China was ground by old-fashioned native stone mills, turning out a coarse product of dark color known as "whole wheat" flour. Many thousands of these mills are in operation in China, but as the white product of the modern mills becomes increasingly popular, as shown by the increased sale both of domestic and of imported flour, there is every reason to anticipate a continued growth in the use of imported flour-milling machinery.

At present Manchuria has 45 mills; Shanghai, 23; Wusih, 8; and Tientsin, 6, with the rest scattered throughout the country in locations where wheat supplies are available.

Statistics as to the country of origin of flour-mill machinery are lacking, but practically all the modern mills in China are using American machinery, some of the best-known American makers being represented by American and British houses.

The newer Chinese mills are modern in every sense and compare favorably with those in the United States, both as to plant and product.

The lack of competent mill superintendents has been commented upon by manufacturers who have visited China and studied the situation, as has the apparent superabundance of labor employed by

the mills. Good men are being developed as the industry progresses, however, and in some cases foreign superintendents are hired by the most progressive managements.

Competition is doing much to help put the flour mills on a basis where strict cost accounting is becoming a necessity, and it may be that we shall witness a change in their custom of sympathy toward relatives and friends in the matter of jobs.

TEXTILE MACHINERY

The outstanding feature in China's industrial development is the growth of its cotton-spinning and weaving industry, which has grown from about 500,000 spindles in 1900 to 1,500,000 in late 1920, and 3,690,642 (operating and under construction) in June, 1924, the last available census.

Shanghai, on account of its many advantages in location, transportation, cheap coal, and low electric-power rates, has become the center of this industry, and there is located 63 per cent of China's total spindles and over 50 per cent of its mills. Next to Shanghai in importance is Tientsin, with 7 Chinese mills having 277,652 spindles (231,580 built and 46,072 under construction); Tsingtao, with 6 Japanese mills and 228,000 spindles (155,000 built and 73,000 under construction); and Wusih, with 6 Chinese mills and a total of 145,480 spindles (136,680 built and 8,800 under construction).

In addition to the rapid increase in spindles, the installation of power looms has made great strides during the past five years. In 1919 there were but 8,200 power looms in China. At the beginning of 1922 the total number installed and on order was approximately 13,000, while in June, 1924, this had increased to 22,777 installed and under construction. As with spinning, weaving is centered in Shanghai, which has 67.4 per cent of all power looms in China.

Owing to lack of statistics it is impossible to give the exact number of American-made spindles or looms in China, but a recent trade estimate places the number at 953,740 spindles and 3,400 looms.

The participation of the United States in this trade may be seen from the Chinese Maritime Customs figures for 1911 to 1923, inclusive, showing total gross imports of machinery for spinning mills for all China, in the following table:

Year	United States and Canada	United Kingdom	Japan	All other countries	Total
	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>
1911	7,161	241,234	60,159	23,028	331,582
1912	9,885	307,283	50,229	91,219	458,616
1913	2,615	572,150	112,500	52,459	839,724
1914	2,530	1,340,100	187,661	308,169	2,038,460
1915	15,446	1,076,229	253,490	74,346	1,419,511
1916	115,431	1,257,961	531,437	29,312	1,934,141
1917	218,928	669,649	300,607	24,616	1,235,800
1918	379,867	669,402	642,948	22,777	1,714,994
1919	1,944,350	813,254	897,760	112,042	3,767,406
1920	3,897,204	1,925,696	1,071,201	33,627	6,927,728
1921	11,768,212	11,160,313	3,622,553	240,994	26,792,072
1922	7,910,042	15,171,840	6,725,264	722,150	30,529,286
1923	933,533	6,152,364	4,557,784	690,736	12,334,417

NOTE.—Shipments credited to Canada may reasonably be supposed to have come from the United States.

Prior to 1915 the share of the United States was negligible, but from 1915 its participation grew to over 56 per cent in 1920, only to decline to less than 8 per cent in 1923. The reason for this rapid increase and subsequent decline may be discovered through an analysis of conditions during the period covered.

During the war the established mills began to enjoy large profits, and these attracted capitalists, promoters, and industrialists to the industry. A large number of companies were organized and machinery was ordered. American manufacturers, taking advantage of the opportunity and aided by the proved excellence of their product and the extremely long deliveries being made by British makers, succeeded in securing a good share of the business.

The Chinese organizers of these new projects, being in the majority of cases inexperienced in large industrial enterprises and anxious to take profits, not only failed to capitalize their companies adequately, but overlooked the necessity of providing sinking funds.

In addition, much of the machinery was contracted for at a time when silver was high and a tael was worth over \$1 gold. Failure to cover exchange properly resulted in many heavy exchange losses when payments became due, as the tael had slumped abruptly in its gold value.

In addition to this, much of the equipment was bought at the peak of prices for spinning machinery. This placed an added burden on the companies purchasing at that time in comparison with those securing their equipment either previously or subsequently to the price peak.

Inexperienced management, and the nepotism which characterized much of the selection of personnel, was likewise a heavy handicap, bringing manufacturing costs out of line with those of efficiently managed mills operated by Japanese and other foreign nationals.

In spite of the handicaps many of the mills made excellent profits for a time, but as competition in the domestic yarn market became keener, these Chinese mills began to feel the effects of their numerous handicaps, and no new spinning machinery of any importance has been purchased by Chinese since 1922.

On the other hand, Japan had thousands of spindles on order in England when the postwar slump hit Japan in 1921. A very large number of these were delivered to China, thus increasing the share of Great Britain in the imports of 1921 and 1922.

While few new spinning enterprises have been started recently, a healthy development has taken place in weaving, as previously pointed out. Here American manufacturers are badly handicapped, British and Continental makers being considerably under them in price and taking the great majority of this business.

Supplies constitute a large item in imports in this industry, and here, again, America has been unable to compete in price in the Chinese market during the past two years, throwing the business elsewhere.

The rapid growth of Japanese interest in the industry in China has taken place largely since 1919, at which time, according to figures published in that year, China's spindles were operated as shown in the table which follows:

Location	Mills	Spindles
Shanghai:		
Foreign.....	5	314,258
Japanese.....	3	206,965
Chinese.....	42	1,073,220
Tientsin, Japanese.....	1	25,000
Total.....	51	1,619,443

Since that time Japanese interests have not only taken over one foreign mill of 65,842 spindles, but have added 926,385 new spindles and 37 mills to their holdings. In addition they are understood to have considerable interest in Chinese mills. Foreign interests have released one mill to Japanese and have added but 42,000 spindles to their remaining four, all of which are in Shanghai. No new foreign mills have started. Chinese holdings have increased 556,723 spindles and 33 mills in the same period.

During the latter part of 1923 the condition of the cotton spinning and weaving industries in China was critical, but during 1924 conditions became so much worse that many of the mills, both Chinese and foreign owned, were closed for varying periods, and for about six months of the year few were operating full time.

Cotton prices during 1924 were high, and the offtake of yarn was disappointing and at prices which were too low to enable profitable manufacturing even by the Japanese mills, which in many cases, receive higher prices for their products than the Chinese receive.

In consequence of this situation there was practically no business in textile machinery during that year, while the supply business in connection with the industry was very largely diminished. Prices quoted by British and American manufacturers for spinning machinery were very similar, and manufacturers of these two countries are still the principal competitors in textile machinery in China, but during 1924 French and German manufacturers entered the market.

Textile machinery is sold in this market direct by the manufacturers, either maintaining their own offices or working through import houses. One of the largest American manufacturers of textile machinery maintains its own organization in China, which works with and through one of the old-established American import engineering firms. Machinery sold is erected under the personal supervision of the manufacturer's organization, and this firm is also in a position to render both advisory and mechanical service when necessary.

KNITTING AND SEWING MACHINES

Power-operated knitting machines are receiving increasing attention from Chinese hosiery manufacturers. The manufacture of hosiery by machinery is a very recent development in China, and even at present the great majority of the hosiery knitting is carried on as a household industry, one or two hand-power knitting machines being installed.

The upward trend in sales of power machines is the result of a gradual and healthy development in the combining of small groups of hand-power machines into small factories, which, after proving

their earning capacity, are purchasing power machines, possibly one or two at a time, and gradually enlarging their output. The majority of these plants are knitting hosiery from imported yarn of from 42 to 60 counts. Part of the product of these machines is being consumed locally and part exported to the Malay States, Netherlands, East Indies, and the Philippine Islands.

About 98 per cent of the power knitting machines at present installed in China are said to be of American manufacture. Sales are made by factory representatives working in some cases through their own organizations and in others through the organizations of import houses.

Another item in which the United States is well represented is sewing machines, which are being introduced throughout China by a large American company which has established its own widespread system of agencies. These agencies are in charge of Chinese who have been trained by the company.

Unfortunately, detailed statistics covering these two items are not available, but the extent of the business may be judged from the fact that net imports under the heading "Machines, embroidering, knitting, sewing," under which they appear, have averaged in value 590,000 haikwan taels over the past 11 years, of which the United States is shown as having supplied imports having an average value of 184,000 haikwan taels per year.

ELECTRICAL MACHINERY AND APPLIANCES

The use of electric light and power plants in China started in the foreign concessions where light and power were sold by central stations. Beginning with the concessions, development is traceable to cities located near the concessions and from these has gradually spread outward.

Probably 90 per cent of the electric plants in China are used for lighting purposes, the only plants carrying power loads of any importance being located in treaty ports such as Shanghai, Tientsin, Harbin, Hankow, Canton, and cities like Hongkong and Mukden, where industrial development has made rapid strides and where the majority of China's large manufacturing plants are located. It is extremely difficult to secure an accurate idea of the exact number and capacity of electric plants in China, as the Government statistics are kept only by number of permits issued, and information gathered from individual plants is usually of the most fragmentary nature and often extremely unreliable. Based on the best obtainable estimates, however, there are nearly 400 electric light and/or power plants in China with a total generating capacity of something over 400,000 kilowatts.

The growth of electrical generating plants in China was slow up to 1916. The industry during 1914 gave promise of rapid growth, but this was delayed by the uncertainties arising at the end of 1914 on account of the war, but from 1916 to 1921 there occurred a very marked and rapid expansion. An instance is that of the Mukden Electric Light Works which started 14 years ago with a 350-kilowatt unit, had increased to only 850 kilowatts in 1920, but now has a capacity of 4,000 kilowatts.

Prior to 1910 the electric light and power industry in China was in an embryonic stage. Practically all of the plants were of European manufacture and few, if any, turbo-generators had been considered for China. In 1910 an American company sold a 350-kilowatt turbo-generator to the Mukden Electric Light Co., this being the first turbo-generator supplied to China. Later in the same year an order was secured for a similar machine of 500-kilowatt capacity for the Changshun Electric Light Co. At the time of the placing of these two orders they were considered revolutionary, as practically all plants installed previously had been driven by reciprocating engines.

The greatest factor in the growth of electrical power plants has been the growing industrial enterprises, particularly of modern cotton spinning and weaving mills, flour mills, and oil mills. A very large part of the output of the Shanghai Municipal Council electrical undertaking is used by local manufacturing concerns. In locations away from Shanghai, industrial enterprises have been responsible for the installation of power plants of their own, varying in capacity from 500 to 3,000 or 4,000 kilowatts.

The rapid growth in the supply of American machinery has been due to an intensive campaign by American manufacturers and their representatives or agents during a period when exchange between gold dollars and silver was particularly attractive to the purchaser, enabling them to purchase complete plants at a low first cost. American manufacturers for a number of years, both during the war and immediately following, were able to secure orders, as most of the large European manufacturers were unable to make deliveries, and as a result of this, machinery manufactured in the United States received a very distinct stimulus.

Simultaneous with this demand for industrial machinery, undoubtedly influenced by the electrical equipment installed in the spinning mills, there was a growth in the demand for electric lighting for cities, large and small, and while the manufacturing industries are confined to districts surrounding the large open ports, lighting installations quickly spread themselves over all parts of China from north to south. Electric lighting plants are now to be found in cities many days' journey from the nearest railways and waterways. In many cases these small plants are backed by local citizens, who, after having visited the outports, appreciate the convenience of electric light, compared with the methods to which they were previously accustomed.

To-day there are very few cities or towns of any considerable population which are without a supply of electricity. A fair number of small units of 2½ to 10 kilowatts in capacity are distributed in locations where power from central stations is not available.

In most places in China are available cheap supplies of coal conveniently located. Much of this coal is of poor quality, but in spite of this, with anything approaching good management, these small lighting plants pay handsomely, as it is always possible to secure high rates for electric current and thus obtain good profits on investments. Even in locations where cost of coal is high, many of these small plants are operated, selling current to consumers on a flat-rate basis from \$1 to \$1.50 per 16 candlepower lamp a month.

During the past eight years there has been healthy expansion in turbo-generator plants in such places as Shanghai, Kwangtung, Hankow, Foochow, Harbin (native city), Kirin, Changchun, Tientsin, Peking, Wuchang, and Amoy. Owing, however, to the disturbed political situation and the seizure of certain plants by military officials, also the demand for free current, certain power plants in China are unsatisfactory from a credit point of view. In many cases these power plants are carrying heavy overloads without an opportunity of shutting down for periodic inspection and overhaul, with the result that the plants are in very poor shape.

In addition to turbo-generator units, there are a large number of generators driven by steam and oil engines. These range from the smallest sizes of a few kilowatts up to 300 kilowatts in capacity. There are also a few water turbines of small size but there has been practically no development of any consequence in this special harnessing of power in China.

Beginning with 1921, European—particularly German and Swiss—competition began to show itself to a very appreciable degree, offering equipment which, although considered in many cases not equal to American material, was acceptable to Chinese purchasers, particularly at the prices offered. European manufacturers seem to be willing to spare no expense to get back this class of business in China. This is evidenced by the large number of representatives now competing for power-plant business here. This, coupled with the general falling off in demand, on account of political conditions during the last two years and also on account of the fall in exchange, has made business for American machinery show a very considerable falling off. Unfortunately, Chinese Maritime Customs statistics fail to make a separate classification for electric-power plants and their equipment. Imports of this class of material are listed under "Electrical materials and fittings," "Machinery, other kinds and parts of," "Machinery, propelling (boilers, turbines, etc.)."

It is also the practice to list complete cotton-spinning plants, flour mills, etc., under their respective headings, including in the entry any electrical equipment which may form a part of the shipment. Thus, no definite import figures are procurable for the whole of China.

Estimates made from available individual port statistics, and by importers, place 1923 imports of electric-power stations, of all classes, at a total capacity of 50,000 kilowatts.

In 1923 under the customs heading "Electrical materials and fittings" the total value of gross imports was 8,480,510 haikwan taels, of which the United States supplied 1,322,000, Great Britain 1,244,500, Germany 2,064,100, and Japan 2,495,100 haikwan taels.

With the continued widespread domestic uncertainty and disorder and the intense low-priced European competition, the prospects for any heavy increase in the sale of American electrical machinery in China can not be considered as bright at the present time or in the immediate future.

Orders will be placed, of course, for additions to present installations, largely made up of American machinery, as in certain instances it is difficult for European manufacturers to match this

equipment. Also with any renewal of activity in the cotton spinning and weaving industry, we can expect an increased sale of power-plant machinery, provided the order for textile machinery is placed with American manufacturers; and in this class of machinery American manufacturers seem to be in line as they encounter competition only from British manufacturers, Continental manufacturers having supplied very little textile machinery to China. It is usually the case that when contract is taken for a complete textile mill, the power plant goes to the same supplier as the spinning and weaving machinery.

The upkeep of electric plants is most unsatisfactory from the point of view of efficiency, and the manufacturers or their representatives in China encounter considerable difficulty in impressing upon their customers the necessity of making repairs as and when they become necessary, the tendency among the Chinese operating plants being to get along as best they can until repairs are absolutely necessary in order to keep the plant running, and then the seller is called on to perform a rush job, often at far greater expense to the customers than would have been necessary had the repairs been made in time.

The majority of plants make no effort to secure an evenly distributed load, most of those in interior cities starting at dusk and running until daylight and closing down during daylight hours, as no day load is available. Manufacturers are endeavoring to educate the operators up to the point of securing a 24-hour load; and while they have met with success in isolated cases, the idea is very slow in spreading.

Approximately 80 per cent of the imports of power-plant equipment from the United States is controlled by two American companies. These companies have offices in Shanghai and branch offices in various treaty ports, where they are operating in conjunction with established engineering firms. A considerable amount of advertising is done by these companies both in foreign weekly and monthly journals and in Chinese newspapers. Both methods are proving of considerable value.

With the increased use of electric power the market for electrical goods of all sorts is expanding. Sales of motors, meters, transformers, switchboard material, wire, insulators, lamps, fans, plugs, and numerous electrically operated household appliances are increasing. Exact figures are unobtainable, as customs classifications give no detailed data.

Prior to 1915 Germany was the largest supplier, being credited with 35 per cent in 1913, but its share dropped to zero from 1916 to 1919, inclusive. In 1920 Germany supplied but $1\frac{1}{2}$ per cent of total imports while by 1923 this share had increased to $24\frac{1}{2}$ per cent. German prices since the war have been extremely low and the competition has been hard to meet on such items as small motors, meters, lamps, and household appliances.

The Japanese have bettered their position in this market, aided by the development of their home manufacturing industry and the excellent opportunity afforded by the dislocation of trade during the World War. In 1913 Japan is shown as supplying 16.3 per cent of total imports, its share being valued at 392,749 haikwan

taels. In 1923 its share was valued at 2,495,131 haikwan taels or 29.4 per cent of total imports.

The United States has secured an increasingly important share of this trade. Prior to the World War the share of the United States was small, being in 1913 but 7.4 per cent, but by 1923 this had increased to 15.5 per cent in spite of the increasingly keen competition from Japan and Germany. The greatest participation was in 1921 when the United States secured 34.7 per cent of the total, but that year may be regarded as abnormal.

Great Britain supplies a good portion of this class of material, its share over the 10 years, 1914 to 1923, inclusive, being 18.5 per cent.

Although domestic manufacture is not highly developed, there are an increasing number of Chinese firms making various types of electrical equipment. Among the domestic manufactures are lamps, insulators, dry cells, meters, and a fairly complete line of wiring devices, fuses, and heating devices. The largest individual manufacturer is an American company which makes all these items except dry cells and heating devices, marketing their products through the China agents of their parent company.

AUTOMOTIVE EQUIPMENT

China, a country one-third larger than the United States and having a population usually stated as 400,000,000, had less than 11,000 motor vehicles of all descriptions operating at the end of the year 1923, including 1,200 in Hongkong. These were divided as follows:

Passenger cars-----	8,508	Fire-fighting apparatus-----	95
Trucks and motor busses----	1,140	Airplanes and seaplanes-----	99
Tractors-----	2		
Motor cycles-----	1,124	Total-----	10,968

These figures were compiled by the Shanghai office of the United States Department of Commerce with the assistance of American consuls throughout China, and are the most accurate figures obtainable at this time, owing to the lack of governmental or other statistical bureaus in China.

The principal reason for China's unimportant position as an automobile user is that it is practically without roads on which automobiles can be safely and successfully operated.

Statistics as to the extent of roads which can care for automobile traffic are, to say the least, incomplete. Aside from the hard-surfaced roads existing in the foreign concessions of the various treaty ports of China, there are extremely few roads which will permit the use of automobiles. The latest available information as regards roads throughout China is that recently compiled by the Chinese Government Bureau of Economic Information. In publishing this data the bureau states that the utmost difficulty was met in securing complete information, but that the figures have been checked from every possible source and represent the most accurate statements available at this time. These figures indicate that there are 3,535 miles of roads actually constructed, 3,090 miles partly constructed or under construction, and about 17,000 miles projected on

which no work has yet been done and for which no provision has been made as to funds.

These roads do not represent hard-surfaced highways, many of them being mud roads which have been put in a state of repair which will make it possible for automobiles to use them.

It is for this reason that approximately 80 per cent of the automobiles in China are concentrated in the cities of Shanghai, Peking, and Tientsin, as the following table showing the approximate distribution of motor vehicles in China and Hongkong will indicate:

City	Passenger cars	Trucks and busses	Motor cycles	Airplanes and seaplanes	Fire fighting apparatus	Tractors	Total
Amoy ¹	26	9					35
Antung.....	8		2				10
Canton.....	288	125	135		4		552
Changchun.....	29	9	2				40
Changsha.....	6	4					10
Chefoo.....	2						2
Chinkiang ¹	2						2
Dairen ¹	152	27	24		7		210
Foochow ¹	9	8					17
Hankow ¹	12	10					22
Hankow.....	214	11	39	2	3	1	270
Harbin.....	342	91	12		6		451
Hongkong.....	715	158	320		11		1,204
Kalgan and Urga.....	105	10	3				118
Mukden.....	102	15	6	9			132
Mankung.....	52	2	6	3		1	64
Nantungchow ¹	100	13					113
Newchwang.....			9				9
Peking ¹	1,248	35	39	42			1,364
Paotingfu ¹				9			9
Shanghai.....	4,094	581	330	25	49		5,079
Tientsin ¹	750	14	144		15		923
Tsinan.....	63	9	10				82
Tsingtao.....	188	9	43				240
Yunnanfu.....	1			9			10
Total.....	8,508	1,140	1,124	99	95	2	10,968

¹ Figures not revised.

In addition to the lack of roads, it must be borne in mind that the per capita purchasing power of the vast population of China is extremely low, in most cases being barely sufficient for the necessities of life.

PASSENGER CARS

From the above it is clear that China's potentialities as a market for automobiles can not be gauged on the usual factors, such as population. That it is a growing market, however, is clear from a perusal of net import figures covering the value of automobiles imported over the period 1908 to 1923, inclusive. These are given below and include only the value (in haikwan taels) of motor cars and parts:

1908.....	109,814	1916.....	536,725
1909.....	168,621	1917.....	914,347
1910.....	181,304	1918.....	1,272,981
1911.....	286,860	1919.....	2,158,998
1912.....	250,610	1920.....	3,477,219
1913.....	485,182	1921.....	3,569,354
1914.....	521,955	1922.....	2,297,156
1915.....	433,043	1923.....	2,165,967

American cars have occupied an important position in the market since China became an automobile user.

The principal commercial center and the most important city in China is Shanghai. The greatest individual share of the motor-car imports come through that port. Figured by value, the average over the past 10 years was 54.19 per cent, the next largest share being taken by Tientsin, which shows an average percentage of 27.85 over the same period.

In addition to its position as chief port of importation, Shanghai has the largest registration of motor vehicles of all the cities in China, and it is therefore natural that the principal dealers have their head offices there.

Sales of motor vehicles are effected through agents appointed by manufacturers or their export distributors. These agents hold exclusive sales rights in certain specified territories. Where agents have branches outside Shanghai they control all territory their branches can advantageously cover. Few agents, however, are in a position to handle the entire country, and they either appoint subagents or the manufacturer appoints an agent in each of the important distributing centers such as Shanghai, Tientsin, Peking, Hankow, Harbin, and Hongkong.

In appointing agents to handle all China the most rigid and painstaking study should be made of their ability to adequately cover the territory, either through their own organization, or through subagents who are properly qualified to handle automobiles to advantage. Care should be taken that no important consuming section of the country be neglected, as with the gradual spread of the use of automobiles the problem of wide distribution gains rapidly in importance over that of centralized selling effort in the large consuming cities.

To effect proper distribution, China should be treated as three separate units—North, Central, and South. North China, with Tientsin as its chief port, may be regarded as that portion lying north of 34° N. latitude; Central China, to which Shanghai is the principal port, from latitude 25 to 34° N., and South China, covered from Hongkong, includes territory from the border of Indo-China to latitude 25° N.

At present, approximately 25 makes of American cars are represented in China on an agency basis. Nearly all these are represented in Peking, Tientsin, and Hongkong by agents or subagents.

The automobile business in China is in the hands of foreigners, and for this reason is conducted along practically the same lines as in the United States or European countries. Advertising is carried in daily papers in both Chinese and foreign languages. Repair and service stations are maintained by agents, the majority of those in Shanghai operating garages in connection with which a hire-car service is frequently operated. Sales are made, if necessary, under time payment plans.

There are no automobiles manufactured in China, but body building is done in Shanghai, where very excellent bodies both of open and of closed models are turned out.

No definite figures are obtainable as to the proportion of Chinese-owned automobiles, but the following figures may be taken as an indication. In the French concession of Shanghai at the end of 1923, out of 1,234 passenger automobiles registered, 324 were Chinese owned, and it is presumed that the rest of Shanghai may be calculated on practically the same basis. Peking shows 1,071 Chinese owners out of a total of 1,353 cars. Canton, with some 300 cars, busses, and trucks, has approximately 250 owned by Chinese.

The foreign population in treaty ports constituted the best market formerly, but since Chinese have learned to use motor transportation, the important and growing market can be looked for among Chinese buyers, with the foreign population as a steady, but hardly an increasing outlet.

American cars are well known and well liked in this market. The past year has seen increasing imports of small, low-priced European cars, and while increasing sales effort is required from year to year, as competition becomes keener, there is every reason to believe that the American car will retain its prominent position in this market.

MOTOR TRUCKS

The use of motor trucks is unknown except for hauling within the cities where modern roads exist, and for use as busses both in cities and in certain parts of China where roads are built or where the terrain lends itself to automobile travel.

The concentration of trucks in a few cities is well illustrated by the following table showing the approximate registration figures at the end of 1923:

Amoy (Changchow 4; Anhui 5)	9
Canton	125
Changsha district (busses)	4
Changchun	9
Dairen	27
Foochow	8
Hangchow (trucks, passenger bus bodies)	10
Hangkow	11
Harbin	91
Hongkong (76 trucks and 82 motor busses)	158
Kalgan and Urga	10
Mukden district (including 7 busses)	15
Nanking	2
Nantungchow (10 busses)	13
Peking	35
Shanghai	581
Tientsin (3 motor busses)	14
Tsingtao	9
Tsinan district (2 not in use)	9
Total	1,140

In addition to the lack of roads this condition is aggravated by the antagonistic attitude of guilds to members of which the introduction of automobile transportation would mean loss of employment. This, in certain sections, assumes a very serious aspect, although in the majority of the foreign concessions the automobile is recognized as an inevitable adjunct to modern development. As Chinese become conversant with the advantages of the truck over old methods of haul-

age, it is believed that such opposition will gradually lessen, and in addition, more interest will be taken by the Chinese in the development of roads.

Shanghai has developed into the largest individual truck market in China by reason of its size, its greater industrial development, and the fact of its spreading manufacturing and shipping districts, necessitating longer hauls which can not be quickly and conveniently made by water.

The district is well supplied with canals, but low water causes bad congestion along the waterways, and truck haulage is being resorted to in an increasing measure. As other centers of China become industrialized, the necessity for longer hauls by land will become apparent. The expansion of the railroads will bring with it a call for feeder systems.

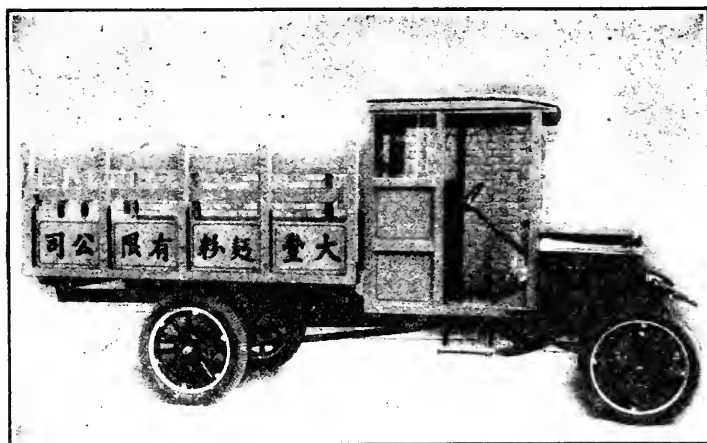


FIG. 4.—Truck with chassis built in Tientsin

These developments will be extremely slow, however, and it is felt that the greatest possibilities within the next few years lie in the field of bus transportation. At present motor busses or cars for public passenger transportation are operating on regular routes in cities and between cities and towns in various parts of China. Lines are operated in Shanghai, Canton, Hongkong, Tsingtao, Harbin, Mukden, Dairen, Tientsin, Hangchow, Changsha, Chefoo, and Kowloon. Some intercity lines are: Kalgan to Urga, Tungchang to Wuting, Lintsing to Tehchow, Tehchow to Nanking, and Tsining to Tsaochow.

These lines are proving extremely popular among the Chinese, and additional routes are planned in all sections of the country where roads make it possible. These routes do not develop as rapidly as planned, owing in part to unsettled conditions existing in many sections of the country. Dealers are carefully watching this phase of the automotive market as being the most likely of development in the near future.

It is impossible to ascertain from any published figures the actual import of motor trucks into China. The customs list them under a heading which includes "Vehicles: Railway carriages and wagons (including tramcars)." However, it is safe to assume that excluding Hongkong, 80 per cent come through the port of Shanghai, and in view of this assumption, the following figures showing approximate imports through that port for one year, October, 1923, to September, 1924, inclusive, will be of interest: From the United States, 152; Great Britain, 2; France, 2; Germany, 4; total, 160.

The above record includes light commercial trucks of a well-known American make, many of which are used in conjunction with locally built bodies in hire-car service. It is, therefore, impossible to assume that these figures indicate growth in the use of truck haulage in proportion to the number of trucks imported.

Import figures on trucks over the past three years, could they be obtained in detail, would be very misleading, owing to the fact that in Shanghai there were in stock at the beginning of 1925 probably between 70 and 90 trucks of 1 to 5 tons in capacity, which can not be disposed of. These were brought in as initial orders on agency arrangements, some on speculation, while others represent stock imported on orders later canceled. They are being gradually worked off at prices below present replacement costs, and represent a serious deterrent to new imports for some time to come.

There are in China no separate organizations interested in truck sales, trucks being handled more or less as a side line by the motor-car dealers.

More attention is being paid to light commercial trucks for bus service, town delivery, and similar uses, as this field promises earlier returns than that of haulage.

METALS AND MINERALS

Metals and minerals constitute one of the important items of China's imports from the United States. In 1923 this classification covered 6 per cent of the direct imports from that country.

Although China is known to have excellent resources both in iron and in coal, the lack of modern and efficient transportation prevents development on a commercial basis, and instead of a producing country China is an importer of practically all requirements in iron and steel. This condition is paralleled in the majority of the other metals and minerals which China uses. Those which China produces are dealt with under "Exports."

VALUE OF IMPORTS

With the industrialization of China, carrying with it increased manufacturing facilities and the rapid progress in the construction of modern factories, warehouses, business buildings, wharves, godowns, residences, and apartment houses, the use of this class of material is expanding, as illustrated by the following table showing total value of imports of metals and minerals, from all sources and that portion supplied by the United States, for the years 1913 and 1923:

Item	1913			1923		
	United States	Total	Per cent	United States	Total	Per cent
	<i>Haikwan taels</i>	<i>Haikwan taels</i>		<i>Haikwan taels</i>	<i>Haikwan taels</i>	
Aluminum.....		5,211		3,494	39,574	8.8
Aluminum, manufactures of.....		65,222		1,215	142,288	.9
Brass and yellow metal:						
Bars, rods, sheets, plates, and nails.....		493,972		2,822	1,354,606	.2
Wire.....		87,246				
Unclassed.....		263,780		6,116	161,327	3.8
Copper:						
Bars, rods, sheets, plates, and nails.....		258,083		3,995	861,760	.5
Ingots and slabs.....		6,130,774		4,697,632	5,817,291	80.8
Wire.....		203,247				
Other manufactures.....		28,397				
Unclassed.....		91,406		12,241	154,689	7.9
Iron and mild steel, new:						
Anchors, anvils, chains, and forgings.....		140,711		10,056	296,012	3.4
Angles and tees.....				11,682	541,077	2.2
Bars.....		1,858,696		600,199	4,745,706	12.6
Castings, rough.....	20	1,989	1.0			
Cobbles and wire shorts.....	73,091	846,415	8.6	332,198	1,281,827	25.9
Hoops.....	33,634	366,204	9.2	59,382	641,864	9.3
Joists.....				10,146	262,569	3.9
Nail rod.....		326,653			41,806	
Nails and rivets.....	633,573	1,443,562	43.9	397,061	1,990,259	20.0
Pig and kentledge.....		230,164			227,163	
Pipes and tubes.....	23,905	376,948	6.3	764,260	2,062,737	37.1
Plate cuttings.....		762,269		52,028	1,156,358	4.5
Rails.....	372,302	922,335	40.4	924,366	1,575,954	58.7
Screws.....				131,709	271,930	48.4
Sheets and plates.....	63,524	1,254,831	5.1	101,606	2,147,916	4.7
Wire.....	1,882	283,187	.7	5,108	191,751	2.7
Galvanized sheets.....	323,293	1,417,244	22.8	321,350	2,871,365	11.2
Galvanized wire.....	15,696	330,891	4.7	64,042	741,168	8.6
Ore.....		207			34,757	
Manufactures (not including tinned plates, enameled ware, needles, scales, safes, and stoves.....	97,702	1,749,953	5.6	89,825	429,925	20.9
Unclassified, including old.....	30,511	2,010,134	4.5	283,507	3,091,582	18.8
Lead, in pigs and bars.....		770,104		26,853	1,469,488	1.8
Tea and sheet.....	841	30,923	2.7		83,714	
Other manufactures.....		53,236		536	109,761	.5
Manganese.....		1,341			1,812	
Nickel.....		104,114		4,130	363,190	1.1
Manufactures of.....		16,221				
Quicksilver.....		74,893			140,340	
Steel, (bamboo, bars, hoops, sheets, and plates).....	150	773,171		254,100	709,103	35.8
Cast, wire, and wire rope.....	638	163,506	.4	14,924	510,967	2.9
Tin, in slabs.....		2,324,267			3,375,730	
Manufactures of (not including tinfoil).....	248	112,888	.2		1,679	
Tinned plates.....	76,086	2,439,709	3.1	1,220,826	4,883,560	25.0
White metal or German silver.....		206,633			30,270	
Zinc (spelter).....		107,254		1,200	88,177	1.4
Sheets and plates.....		333,876		28,566	238,309	12.0
Other manufactures.....		93,240		5,309	98,176	5.4
Metals and minerals unclassified.....	18,218	260,550	7.0	244,509	729,297	33.5
Ores, unclassified.....		104			12,578	
Total.....	1,765,314	29,815,761		10,687,073	45,990,422	

It will be noted that total business has increased from about 30,000,000 haikwan taels in 1913 to approximately 46,000,000 in 1923, and America's share has increased from less than 2,000,000 taels and 6 per cent of the total to over 10,500,000 and more than 23 per cent of the total in 1923. In addition to this there has been an increase from 19 to 37 in the number of items which America is supplying.

The iron and steel market in China is extremely competitive; and, with price as the prime factor except in rare instances, the trade is very susceptible to changes in exchange rates which make purchasing in one country advantageous, while the following year another country may be in a position to conduct business on a basis more profitable to buyers in China.

American manufactured steel products in general are recognized by the Chinese as being superior in quality and finish. The average Chinese dealer, however, is often unable to pay the price of the more expensive American product, as Continental steel mills are selling direct, thus making the competition for importers handling American steel products extremely difficult. Such commodities as bars and steel plates, in which quality is not easily determined, the dealer will purchase from Great Britain or the Continent if their price is lower. A good portion of the American sales of steel are effected through a large combination of steel mills in the United States, which maintains its own offices in Shanghai, and handles business for all China from there, selling both direct and through agents. Aside from this company there are no American mills represented by their own organization, and sales of metal products are handled in the majority of cases through established agents representing mills direct, or by import houses.

Chinese firms are now direct importers in a number of cases, but the greater proportion of business is still placed through foreign firms in China.

The usual terms on which importers and agents work are draft at 90 to 120 days' sight, interest at current rate, and exchange for buyer's account.

APPLICATION IN INDUSTRY

The principal uses to which the metals listed in the above table are put in China are as follows:

Aluminum.—Small castings and some stampings.

Aluminum, manufactured, sheets.—In the manufacture of electrical appliances; building of motor car bodies; telephone and electric bells; switch boxes; water bottles; and lately, in North China, for airplane appliances.

Rods, wire.—The use is practically limited to manufacture of electrical appliances. This is a comparatively new departure in China, and no extensive output has been attained.

Copper in ingots.—In the manufacture of coins. Also used in Chinese Government arsenals, railway, and shipbuilding establishments.

Copper and brass. (Bars, rods, sheets, nails, wire tacks).—In the manufacture of ornamental structures; kitchen utensils; domestic hardware; trunks; doors; panels; window accessories; signboards; sheathing for river steamers; water taps and valves; curio imitations; printing, electrical, and telephone appliances; rail, car, and locomotive repairs; building, etc.; wire nets; lanterns; radiators; wire-less materials; and tanks.

Mild soft steel. (Angles, bars, joists, channels, ties, tees, half rounds).—Usually of a tensile strength of 24 to 28 tons per square inch, and 20 per cent elongation in 8 inches is used in all general

construction work connected with buildings, ships, cars, bridges, tanks, sheds, warehouses, wharves, etc.

Mild steel plates, sheets.—Black, open and blue annealed used in enamelware, drums, warehouse shutters, fire and insulating doors, piling, furniture, motor-car bodies, stoves, and boilers.

Nail rods.—Also called wire rods. Manufacture of nails for native purposes; defective rods for use in reenforcing.

Pig iron.—Imported iron used only by railways or shipyards. Very small quantities, usually mixed with native-made iron, constitute the present casting product of China for stoves, grates, bars, pillars, wheels, crossings, sewer covers, and piping for waterworks.

Hoops.—For press packing, bundling, trunk hardware, baling, and truck wheels.

Pipes and tubes.—Seventy-five per cent for gas and 25 per cent for water pipes; in heating and sanitary installations, plumbing, railways, lighting towers, general canalization and draining.

Wire, galvanized.—General kitchen utensils, telegraph and telephone installations, domestic hardware, fences, bundling, etc.

Galvanized sheets.—Signboards, roofing, stoves, tanks, cylinders, cisterns, dust bins, buckets, washing tubs, watering pots, petrol storage.

Tinned plates.—American product favored for canning; British product for other domestic purposes; various uses are in the manufacturing of tins for all preserves, dried vegetables, tobacco; interior decorations; moldings, panels, etc.

Lead, in pigs and bars.—Rolled into tea lead and foil; manufacture of cartridges; insulating, etc.

Lead, tea and sheet.—For packing purposes, insulating, etc.

Nickel.—Manufacture of silver coins and in plating.

Zinc, sheets.—Manufacture of ornaments, matches, and linings.

Plate cuttings, bars and rods.—Manufacture of native implements for agricultural, industrial, and domestic household purposes, through forging with an inferior quality of tool steel or heat-treated steel by native blacksmith methods.

Iron and mild steel, old.—Put to practically the same uses as plate cuttings.

Quicksilver.—For medical purposes and also used by arsenals.

LEADING PORTS IN MINERAL TRADE

Approximately 64 per cent of China's total imports of metals and minerals in 1923 came through the four ports of Shanghai (22 per cent), Hankow (16 per cent): Dairen (15 per cent): and Tientsin (11 per cent). The chief items taken by each of these ports are shown in order of value:

Shanghai.—Bars and rods, galvanized sheets, tinned plates, pipes and tubes; copper ingots, sheets, plates, and wire; pig lead; cobbles; angles; brass sheets and plates.

Dairen.—Rails, bars, pipes and tubes, plain sheets, galvanized sheets, copper ingots and slabs, scrap, wire nails, miscellaneous manufactured articles, bolts and nuts.

Hankow.—Copper ingots and slabs (this item valued at 3,997,000 haikwan taels, constituting over 50 per cent of the total, being

destined for the Hankow mint), tinned plates, bars, wire nails, hoops, pig lead, galvanized sheets, bamboo steel.

Tientsin.—Bars and rods, tinned plates, sheets and plates, copper ingots and slabs, galvanized sheets, hoops, cobbles, shorts, nails.

LUMBER

The quality of timber desired for the market in China depends in the first place upon low price rather than upon quality or durability. This applies to probably 90 per cent of the construction work in the country. Very few Chinese undertakings in construction work are based on quality and durability in preference to cheapness.

This report, therefore, covers primarily the cheap woods required for the trade and does not take into consideration the higher-grade woods imported for the furniture trades or for special finishes and interior decoration of high-grade buildings, such as are built mostly in treaty ports in China, as these woods are not supplied to this market by America.

VARIETIES IMPORTED

From America are obtained Pacific coast softwoods, including Douglas fir, hemlock, silver fir, and all the varieties that come mixed in what is generally described as "China grade cargoes" of so-called Oregon pine.

From Japan softwoods are obtained in comparatively small lots from Kyushu, Hokkaido, and southern Sakhalin. These softwoods consist of various species of pine and spruce.

From Siberia a number of varieties of coniferous woods are imported into China in round logs, squared logs, and also sawn into boards and planks. Quality ranges from very inferior types of coniferous woods to high-grade pine such as kedra. Matchwood is also imported from Siberia in increasing quantities.

From the Philippines and Indo-Malayan territories, lauan, which is also known under other names through the Indo-Malayan States, is imported and classified as hardwood. In actual fact, however, the majority of this class of wood brought into the market is about as soft as Oregon pine. It is finding growing favor in China and the demand is keeping up excellently as compared with supplies available.

The above woods are used in general construction work. In Chinese house building they are combined with native woods. Most of the Chinese houses are built with Foochow pine poles used as uprights. For joists and floors either imported woods or native pines are used.

Since most native pines come in lengths of 7 to 12 feet—very little of the wood being over 9 feet—they are used where these short lengths can be employed, and imported woods of greater lengths are used in joists, flooring, stringers, etc. Native pole uprights of good quality are durable and are cut in the forests to the length wanted for construction of native houses. Attempts have been made in the past to use Oregon pine in place of the native round poles, but such attempts have not proved successful except for

front posts, where the nicely squared Oregon pine gives a better appearance than the round native pole.

Some of the imported woods of inferior grade are used for box-shook manufacture, but the greater part of box shoos in China are made from native pine.

The principal American wood in which the China market is interested is Douglas fir. Normal consumption of this wood in China is approximately 120,000,000 to 130,000,000 feet annually. It is imported in random sizes ranging from 1 by 6 inches up to 24 by 24 inches, the term "usual China specifications" in the lumber trade meaning a random specification from 1 by 6 inches to 12 by 12 inches, in lengths up to and including 40 feet.

The demand for sizes varies with the locality in which it is to be used. The heaviest demand in Shanghai is for 2 by 12 inches, which is the size used for forms in reinforced-concrete construction, which is making rapid headway throughout China. The size second in demand in the Shanghai market is 1 by 6 inches, which is manufactured locally into cheap grades of flooring for use in Chinese houses and buildings of all kinds.

In Tientsin the heaviest stock size is 12 by 12 inches, this being consumed largely by the railways and for heavy construction.

Apart from the uses for native house construction above described, Oregon pine is the principal wood used in general foreign-house construction in treaty port areas, and in foreign-type houses built in Chinese cities. It is also used for wharves, piling, bridge work, and railway sleepers.

Aside from the importation of hemlock, silver fir, and bastard woods of similar nature mixed in with Douglas fir and combined in cargoes under the name of "China grade Oregon pine" there are very few other softwoods imported from America into China that can be considered as possible of commercial development.

The lumber trade in China is being gradually educated to import in dimensions to suit consumption, and there is not the same volume of resawing done as in previous years when the heaviest imports were large timbers which were resawn by hand. Mills in China operate under a handicap. It is only possible to make them successful because of speed of operation and quantity of output. In actual practice, where time is not a great object, sawing by hand is cheaper than machine sawing.

At present in the treaty ports such as Shanghai and Tientsin, where large lumber yards are maintained, heavy imported timbers are worked up by sawmills operated by the lumber importers, but even considering the mills in the treaty ports, the majority of the resawing in China is done by hand. Wages are extremely low and the workmen possess remarkable skill.

Competition met by Douglas fir varies according to the values of the different woods. When Oregon pine sells at a low price imports are heavier; when it is higher in price imports slow down. This is the natural result of supply and demand when the Chinese look more to the price of the wood for purchase than to the quality of species or durability thereof.

The varieties of hardwoods imported into China are very great, comprising northern, tropical, and subtropical woods of every description. Of the northern woods, oak and ash take the lead. Of

tropical and subtropical woods, lauan and teak are the most prominent.

American hard-woods (exports of which to China are decreasing) do not figure in the China market because they are either too expensive or are no better than the hardwoods obtainable from other sources at lower prices. The mills in China are able to turn out high-grade hardwoods in interior trim, flooring, and other grades, and are becoming a centralizing point for hardwoods from various neighboring territories to be manufactured, with cheap Chinese labor, into finished kiln-dried products for reexport to foreign countries, including the United States, where the markets will pay a higher price for high-grade materials than is obtainable for ordinary construction work in China.

Oregon pine is imported direct by American, British, and Japanese mill agents and importers operating lumber yards in Shanghai and other treaty ports. The majority of the importers have their head offices at Shanghai, with branch offices in Hongkong, Nanking, Tientsin, Hankow, and Tsingtao. These importers sell most of their lumber to Chinese lumber dealers, but in many instances they sell it direct to contractors on individual jobs.

TERMS TO DEALERS

The usual terms of sale to dealers are 20 per cent bargain money with order, balance, cash 30 days; although a variety of terms ranging from 60 to 120 days are given to responsible dealers who have an established credit.

In a majority of instances these Chinese dealers are located in the large treaty ports and they in turn sell to dealers in the interior.

The ultimate buyer of most Oregon pine is the contractor, who usually pays the dealer as and when he receives payments from the owner for whom he is building.

The lumber dealers in the treaty ports belong to guilds, but so far as maintaining prices or similar functions usually attributed to guild activities, the lumber guilds in treaty ports are ineffective.

STATISTICS OF TRADE

The following table shows the imports of softwood into China for the years 1921, 1922, and 1923:

Imported from--	1921	1922	1923
	<i>Square feet</i>	<i>Square feet</i>	<i>Square feet</i>
Hongkong.....	152,882	785,202	566,386
Macao.....	39,215	17,104	58,975
French Indo-China.....	16,510	4,100	2,065
Singapore, Straits Settlements, etc.....	316,974	160,739	31,610
Netherlands Indies.....			41,653
Russia and Siberia, by land frontier.....	782,306	3,503,699	6,123,683
Russia, Amur ports.....	161,387	1,127,697	
Russia, Pacific ports.....	1,718,165	16,347,847	7,598,125
Chosen.....	17,476,371	25,606,919	11,256,116
Japan (including Taiwan).....	7,290,850	16,939,482	14,576,746
Philippine Islands.....	400		10,493
Canada.....	10,076,892	27,178,052	26,254,691
United States (including Hawaii).....	88,348,116	142,012,899	60,695,933
Australia, New Zealand, etc.....		1,156	
Direct gross import.....	126,380,268	233,684,896	127,216,476
Reexported abroad.....	13,527,069	1,344,079	2,080,342
Total net import.....	112,853,199	232,340,817	125,136,134

PAPER

China—the discoverer of paper—remains to-day, owing to backward industrial development, an importer of this commodity rather than an exporter. Within the last 14 years imports have more than trebled in value, increasing from 5,545,197 haikwan taels in 1910 to 16,626,519 haikwan taels during 1923. Japan leads in the import trade (with 5,021,809 haikwan taels to her credit in 1923), with Hongkong, Norway, United States, Great Britain, and Sweden in the respective order named, each taking over 1,000,000 haikwan taels' worth of the total volume of imports.

MANUFACTURE IN CHINA

While China's paper-manufacturing capacity is known to be increasing rapidly, no data are available from which to judge the total capacity. An indication of the increasing quantities handled may be had from the following comparative statement of total exports of Chinese paper to China ports and foreign countries through customs ports for the years 1914 and 1923:

Item	1914		1923	
	Quantity	Value	Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
First quality.....	114, 045	2, 145, 062	207, 876	4, 648, 877
Second quality.....	366, 269	2, 782, 474	350, 462	3, 906, 959
Third quality ¹			212, 000	1, 101, 454
Joss.....	120, 625	2, 128, 433	212, 556	3, 338, 242
Mill.....	41, 123	368, 353	48, 744	587, 170
Strawboard ²			13, 633	56, 633
Other.....	18, 011	95, 140	40, 387	481, 178
Total.....	660, 073	7, 519, 462	1, 085, 958	14, 120, 513

¹ New division.² New heading.

This trade position will doubtless be maintained for a number of years, primarily because China's mineral and water-power resources have not been sufficiently developed to yield the ready supply of water and component chemicals necessary for manufacturing purposes. The few modern mills which have been erected are wholly dependent upon outside sources of supply for certain raw materials. It is claimed that several of these mills have suspended operations for this very fundamental reason.

TYPES IMPORTED

The Chinese Maritime Customs returns of trade for the whole of China do not separately classify specific styles of paper. The only index from which to determine the trade in each particular class is to be found in the individual port returns for the port of Shanghai, through which 40 per cent of the total volume of imports enter China.

The following table gives the value in haikwan taels of the principal paper items imported through Shanghai, and sources of origin for the year 1923.

Articles	Total gross imports into Shanghai	Japan	Sweden	United States	Great Britain	Germany	Italy	Norway
Art.	143, 084	26, 761	-----	28, 722	53, 003	26, 380	-----	-----
Bank note	281, 045	26, 980	-----	234, 742	14, 441	-----	-----	-----
Cardboard	559, 496	95, 185	-----	378, 191	34, 292	-----	-----	-----
Enamelled	666, 102	-----	-----	179, 301	124, 451	95, 166	104, 250	-----
Machine glazed cap	2, 050, 491	190, 812	389, 314	-----	43, 921	179, 349	-----	1, 079, 738
Packing and wrapping	437, 448	116, 716	100, 080	-----	37, 574	96, 122	-----	-----
Strawboard	248, 712	73, 969	23, 214	-----	16, 219	-----	54, 543	-----
Tissue	160, 540	109, 288	-----	48, 189	-----	-----	-----	-----
Wax, paraffin, and grease proof	25, 308	-----	4, 552	2, 334	7, 336	3, 020	-----	4, 881
Writing	1 246, 056	-----	-----	-----	22, 039	40, 654	21, 505	22, 917
Unclassed	394, 223	-----	-----	154, 762	129, 682	23, 435	43, 124	23, 138
Printing, common	845, 254	69, 380	51, 846	276, 792	198, 378	65, 393	-----	-----
Printing, common (Japanese)	2, 040, 820	-----	647, 576	-----	84, 129	298, 564	400, 854	479, 231
Printing, free of mechanical wood pulp	589, 967	589, 967	-----	-----	-----	-----	-----	-----
	2 1, 060, 242	-----	39, 414	-----	631, 549	64, 295	129, 570	58, 694

¹ Of this amount the Netherlands furnished 29,338 taels' worth and Belgium 79,415 taels' worth.

² Of this amount Belgium furnished 99,081 taels' worth.

NOTE.—In 1923 the *hai*kwan tael equaled \$0.80.

Newsprint.—With over 1,100 native and foreign newspapers and 70-odd lithographing and printing establishments operating throughout China, the business in newsprint very obviously dominates the paper trade of China. Annual imports into Shanghai aggregate \$2,500,000. The cheapest quality of newsprint comes in from Japan—a grade with which even the Scandinavian countries can not compete. The better grades of newsprint are supplied principally by Sweden and Norway.

Machine glazed cap.—Commonly known in China as “M. G. Cap” ranks next in importance to newsprint. It is a very thin tissue paper glazed upon one side and used principally in the printing of Chinese books and pamphlets. A sheet is doubled and printed upon the two glazed sides, thus leaving the two interposing rough sides of the sheet blank. The Chinese are beginning to realize that by using newsprint they can print upon both sides of the paper at less cost than by using machine-glazed cap, and the two larger Chinese textbook establishments are introducing newsprint in this work wherever possible. This new policy of theirs will doubtless decrease the demand for machine-glazed cap, but it is still a very important item in the paper trade. This paper is supplied by Norway, Sweden, Germany, and Japan.

Book paper.—A wood-free printing paper is very much in demand. This grade comes mainly from the Scandinavian countries and England.

Art, enamel, and coated papers.—A very large business is done in these classes of paper, used principally in half-tone and calendar work. Deliveries must be made in China before June, in order that the Chinese lithographers may have ample time to turn out the great volume of calendars for the Chinese New Year period. The calendar business is one of the largest single items in the trade. Principal supplies are from America, England, Italy, Scandinavia, Japan, and Germany.

Bank-note paper.—America has a practical monopoly in this character of paper, imports from this source during 1923 having

a value of 234,732 haikwan taels out of a total volume of the trade valued at 281,045 haikwan taels. Small amounts came in from Japan, Great Britain, and Germany.

Blotting paper.—America and Great Britain are the principal suppliers.

Cardboard, pasteboard, and strawboard.—This class embraces one of the most important items in the import paper trade. America holds the cardboard trade. Strawboard is consumed in greatest quantities and is supplied principally by native mills and by imports from Japan. Chip-board, when obtainable from America at competitive prices, is gradually replacing strawboard. In cardboard the principal item is a white patent-coated news back (WPCNB). This paper is used chiefly by the British-American Tobacco Co. and other large manufacturers. America supplies the bulk of the trade, although Japan and Great Britain are sending in a little.

There is also a fairly large market for sulphite bristols, white, in 22½ by 28, 95-pound, 100-pound, and 120-pound. At the present time most of this is coming from Belgium. A rather small market exists for colored index bristols, most of which is consumed by the foreign population.

Egg shell or antique book.—This character of paper is called "cartridge paper" in the customs, but no figures are available. There is said to be a very small market, which is supplied principally by America and Great Britain.

Colored printing.—A large market obtains for supercalendered ground-wood-content book, practically all of which is being supplied by Scandinavian countries.

Copying.—Japan holds the market on this paper with its simili tissue, although a small quantity of American tissue is being used.

Embossed.—Small market, mostly supplied by Europe.

Marble.—Very small market, Germany being the chief supplier.

Machine glazed buff.—A very common machine glazed, ground-wood-content paper used for wrapping and for making cheap envelopes. Scandinavian countries hold the trade.

Packing, wrapping, and kraft.—Volume of trade approximates 300,000 haikwan taels per annum, principally supplied by Japan, Sweden, Great Britain, and Germany.

Parchment, glassine, wax paraffin, and grease proof.—Fairly large market, principal consumers being cigarette, candy, and food-stuff manufacturers. America led in the trade during 1921, but in 1923 the Scandinavian countries largely supplied the demand for this character of goods. Germany is also a factor in the trade.

Simili.—Japan practically controls the market, with Italy and Sweden following.

Tissue.—Greater part imported from Great Britain and Scandinavian countries.

Wall paper.—Very limited demand; practically confined to use by foreigners. Imports mainly from Great Britain.

Toilet paper.—Limited demand, with United States ranking first and Japan second.

Writing.—A fairly large market exists for water-marked sulphite bond paper. The trade is about equally divided between United States and England.

Laid writings.—Market is for sulphite and esparto content, cheap water-marked, laid writing, England being the largest supplier, followed by Scandinavian countries and Japan. The United States has practically none of the trade in laid writing paper.

Cover.—The United States has been losing ground in this class of paper, England remaining the chief supplier, followed by Germany and Scandinavian countries. Market is for a cheaper character of paper generally than that offered by American mills.

Machine glazed poster.—Limited market for this paper, which is really a machine glazed sulphite book. A machine glazed bleached sulphite, which is also on the market, is practically the same as the machine glazed poster. Japan and Scandinavian countries are the main sources of supply.

Drawing.—Very small market; Japan first, England second, Italy third, and United States fourth.

Paper is imported in most instances by local import houses which act either as direct mill agents or as representatives of paper exporters in America and Europe. Japanese mills are generally represented direct by large Japanese houses in China.

DISTRIBUTION METHODS

Distribution is effected through Chinese paper dealers, who buy from the importer and take delivery at warehouse, paying (except in rare instances) cash against delivery.

Importers have been in the habit of indenting against dealers' (usually unsecured) orders, paying import duty, clearance, and handling charges, and allowing dealers 60 days in which to take delivery. This has led to wide gambling by the less responsible dealers, who order in the expectation of price advances and are very difficult to hold to their clearance dates if the market goes against them. This has led to the proposal of the leading foreign paper importers to form an association for the formation and enforcement of standard practices in the paper import trade with a view to eliminating many of the lax methods now followed and to put the trade in foreign papers on a safer basis.

Large paper users, such as the cigarette companies and the larger printing and publishing houses, order direct for a large portion of their requirements.

MISCELLANEOUS IMPORTS

Space does not permit a detailed discussion of the various lines of foreign goods which are yearly being imported by China in increasing quantities. Some of these items, however, are of such relative importance that they are given below in paragraph form in order that some idea of the quantities may be formed. Import figures (values in haikwan taels) in each case are given for the year 1923.

SPORTING ARMS AND AMMUNITION

Imports of sporting arms and ammunition were valued at approximately 122,000 taels. There is a fairly good field for these goods, as hunting is popular in all parts of China and there is a great variety of game to be found. Import regulations are strict.

Sporting-goods houses carry complete lines of rifles, shotguns, and ammunition.

MACHINE BELTING

Machine belting to the value of 1,146,000 taels was imported. Of this 430,000 taels' worth came from the United States, 385,000 taels' worth from Great Britain, and 245,000 taels' worth from Japan. Relative demand for belting is in the following order: Leather, cotton, rubber, balata, canvas and other textiles, and hair. It is estimated that 80 per cent of the belting is leather and is used in power transmission in cotton mills, electric light and power plants, filatures, paper plants, and cement works. The remaining 20 per cent is found in the rice and flour mills, machine shops, sawmills, and other industries.

BOOKS AND MUSIC

Imports of books and music in 1923 totaled in value over 900,000 taels, of which the United States supplied over one-third. Libraries are maintained by the various clubs, and there are a number of public libraries in the treaty ports. A considerable portion of the books imported are of a religious character, imported and used by the missions. In the treaty ports there are excellent bookshops where up-to-date fiction may be obtained, in addition to the latest works on travel, biography, and science.

Printed music is imported in a fair quantity—not only productions of a religious character, but also up-to-date, popular music and also music for the orchestras and bands which are to be found in various parts of China.

BUILDING MATERIALS

This item is of rapidly increasing importance in China, now that foreign type of construction is becoming increasingly popular. Total imports under this heading in 1913 were valued at 723,000 taels, of which the United States supplied imports valued at 145,000 taels, while in 1923 the total had risen to 3,495,000 taels, of which the United States supplied a share valued at 839,000 taels.

CHINA AND EARTHENWARE

Total value of the imports of china and earthenware for 1923 was 1,576,000 taels, the majority of which consisted of cheap ware from Japan. A small amount of finer goods is also imported, but this is mainly for the use of the foreign population and of this ware Great Britain supplies the largest part.

WEARING APPAREL

Under this heading, exclusive of hosiery, leather shoes, and haberdashery, imports were valued at more than 6,500,000 taels in 1923, of which the greatest quantity consisted of cotton clothing manufactured in Japan (which accounted for nearly 3,000,000 taels). Hong-kong is next in importance, supplying imports valued at more than 1,330,000 taels, and Great Britain next with a share valued at 778,000 taels.

Not only is the foreign population to be supplied with foreign-type clothing but an increasing number of Chinese men are adopting foreign dress, wholly or in part. Many of the Chinese wear native clothing with the exception of hats and shoes, which are often imported.

Imports of haberdashery in 1923 were valued at approximately 3,000,000 taels, of which Great Britain supplied the largest share (1,222,000 taels); Germany, 507,000 taels; United States, 275,000 taels; and Japan, 552,000 taels. Excellent goods can be purchased at an extremely reasonable price owing to the fact that duty approximately 5 per cent ad valorem.

Hosiery to the value of 1,431,000 taels was imported. The largest share (valued at 1,263,000 taels) was supplied by Hongkong. Hongkong import statistics show that the largest individual portion originated in Great Britain with £10,672, followed by the United States with £3,512. China is developing the hosiery manufacturing industry and is not only manufacturing for local consumption but is also exporting to near-by countries.

CLOCKS AND WATCHES

Total imports of clocks and watches to the value of 2,074,000 taels were brought in during 1923. Switzerland occupied first position with 649,000 taels, followed by Japan, with 527,000 taels, and Germany, 342,000 taels. The majority of the German and Japanese goods are of a variety which sell at very low prices. The Swiss goods range in price from \$25 to \$300, silver, and represent goods which appeal to the more well-to-do Chinese and the foreign trade. The United States is not yet securing an important share of this business, imports in 1923 amounting to 101,000 taels. A number of the best-known makes of American goods are represented here, and it is believed that they are making an increasingly important market for themselves.

MUSICAL INSTRUMENTS

Under this heading are imported pianos, organs, string and wind instruments, gramophones and parts. The majority of the pianos used in China are manufactured in the country by foreign firms which have made a particular study of the requirements to meet the trying climatic conditions here. Pianos are imported from America, Germany, and Canada, but to be successful they must be manufactured especially for the very damp climate, with its excessive heat in summer, and cold, wet winters. Organs are mainly small instruments with the foot-operated bellows, although the larger churches have excellent pipe organs. Small organs are also manufactured in China. String instruments for foreign music are practically all imported, but the field is practically confined to the foreign population and a few symphony and dance orchestras. The same applies to wind instruments. Gramophones are imported from the United States, Great Britain, Germany, France, and Italy. Gramophone cases are manufactured by Chinese firms in Shanghai and elsewhere in China, and imported mechanisms are installed. These mechanisms are imported principally from Germany, France, Switzerland, and America.

INDIA RUBBER AND GUTTA-PERCHA MANUFACTURES

Gross imports were valued at 2,122,000 taels, of which imports worth 1,018,000 taels came from Japan. Under this heading are listed automobile tires and tubes; jinrikisha tires and tubes; rubber boots and shoes; hot-water bottles, which are very popular in China, where they are used as hand warmers, etc.; and a variety of other rubber goods such as hose, tape, rubber soles and heels.

LEATHER

Under this heading are lumped all the classes of leather which China imports. The total value in 1923 was 6,976,500 taels, of which it is estimated that 75 per cent was sole leather. The greatest share came through Hongkong and consisted of Australian and Singapore leathers. Singapore leather is a cheap grade of soft sole leather very widely used on account of its low cost. American sole leathers are being imported in increasing quantities as the trade-marks under which they are sold are becoming better known, but at present Australian sole leather (bellies and sides) are the most important of the higher grade leathers. Some good sole leather is manufactured in China by modern tanneries, but the majority is similar to the cheap Singapore variety.

ARTIFICIAL LEATHER AND OILCLOTH

Separate figures are not published for artificial leather and oilcloth. Total gross imports (not including linoleum) during 1923 were valued at 175,000 taels. The share of the United States was approximately 50 per cent. American oilcloth and artificial leather are well liked in the market. Artificial leather is used for automobile tops and for upholstery, jinrikisha tops, furniture covering, bookbinding, and novelty manufacture. Oilcloth is used principally for counter and chair covers, sweat bands for hats, jinrikisha seats and backs, and uppers for cheap Chinese shoes.

PHOTOGRAPHIC MATERIALS

The United States supplied 398,000 taels' worth of photographic materials to China out of a total importation having a value of 1,741,000 taels in 1923. A well-known American manufacturer of cameras and photographic supplies is making good progress in this market, and China is considered to have great possibilities in the future for the sale of this class of material. The main competition at present comes from Germany.

Moving-picture cameras, films, and projectors are in increasing demand as the motion picture becomes more popular. At present there are about 100 motion-picture theaters showing American, British, German, Italian, and French film plays, while there are half a dozen fairly well organized companies in China producing cinema plays and educational films. The principal competition in motion-picture cameras and projectors comes from France, on account of far lower prices of the French product.

STATIONERY

The United States sold over 500,000 taels' worth of stationery out of a total importation valued at 2,445,000 taels. The use of imported

stationery is confined to schools, colleges, foreign firms and individuals, and the comparatively few Chinese firms who use foreign office equipment. Japan supplied the largest individual share, amounting to 878,000 taels, while Great Britain follows the United States with 508,000 taels, and Germany next with 24,000 taels.

POSTAL PARCELS AND OTHER ITEMS

Under this heading China imported articles valued at 2,157,000 taels from the United States, with a total importation of such articles valued at 7,018,000 taels. Numerous items are included, ranging from personal effects to light goods, such as cutlery in small quantities, jewelry, wearing apparel, and numerous items of various classifications.

A wide range of material falls under the heading of "Sundries, unenumerated," but there are no statistics available from which any definite idea of the quantities of each can be obtained. Among other things included are advertising matter, newspapers, bronze ware, brass, capsules, cloisonne, fan handles, fish nets, Japanese matches, paper-making materials, cottonseed cake, skin and fur sundries, and certain kinds of tobacco.

MARKET DEVELOPMENT

Commercial Attaché Julean Arnold

Indicative of the growth of the American population and American business in China, we find that while there were 24 American firms and 410 resident Americans in China in 1882 (compared with 32 firms and 1,200 individuals in 1890), by 1925 the numbers had increased to 600 American firms and 12,000 Americans. American trade with China has increased fourfold during the past 20 years, constituting in 1923 30 per cent of China's total exports and nearly 20 per cent of its imports, and representing about 8 per cent of the foreign trade of the United States. China's total foreign trade (imports and exports) now aggregates about \$1,300,000,000 gold, 55 per cent of which represents imports. During the past 20 years China's foreign trade has increased threefold and during the past 30 years eightfold. Thus it is apparent that America is now proportionately a greater factor in China's foreign trade than it was 20 or 30 years ago.

Upward of 90 per cent of American exports to China are embraced in the following items: Kerosene and petroleum products, including lubricating oils; cigarettes and tobacco; wheat; flour; metals and minerals, including silver bullion and copper; machinery; dyes; colors and paints; raw cotton; timber; tin foil; paper; motor cars; electrical materials and fittings; canned fruits and vegetables; condensed milk. It is well also to take cognizance of the fact that certain American houses in China supplement their trade in American commodities with certain noncompetitive lines from other countries, and some utilize Chinese products and increase the value of their own business through the addition of Chinese labor. For instance, some of the motor-car bodies are built in China, as this type better meets the needs of the Chinese market than would the bodies imported from the United States. In the sales of machinery and equipment requiring installation, Chinese materials and labor contribute to the transactions of the American houses. In some cases manufacturing plants under American capital, equipped with American machinery and operated under American supervision, contribute to the sum total of American trade with China.

Items which do not enter into the totals of imports into China but which contribute to the success of American effort in China are American shipping companies, insurance companies, banks, and professional firms. Other classes which sell American ideas and contribute in a substantial way to the general success of American enterprise in China are the vast Christian missionary agencies and the Rockefeller Medical Schools, manned by three or four thousand American workers and financed to the extent of about \$10,000,000 gold a year from friends in the United States.

Much has been said and written within recent years about the Chinese importers dealing directly with the manufacturer abroad,

thereby eliminating intermediary agencies, whether they be commission houses, foreign establishments in China, or foreign salesmen. The American manufacturer's attention is called to the developments in Japan, and he is then reminded that China is about prepared to follow suit. Cognizance must be taken of the fact that Japan and China are as different as are England and America, in a foreign-trade sense. Until China has made very much further advancement in its internal developments, we need not expect Chinese capital and Chinese business organizations to engage in direct foreign trade. In other words, the country will during the next few decades offer greater inducements for its capital and energy in internal developments than will be offered in foreign trade. Hence China's foreign trade will for some time be handled through foreign organizations rather than by native concerns.

OPENING A HOUSE IN CHINA

For those lines in which sales or market possibilities warrant, it is advisable to open a house in China. With the recent amendments to the China trade act, it is now possible to incorporate for business in China under the China trade act, with exemptions from corporate taxes for business done in China. As Americans in China enjoy extraterritorial treaty rights they are not subject to Chinese laws or courts as regards either their persons or property. During the European war certain American interests opened establishments in China on a very pretentious scale only to close down with a slump following the war. While the conditions in China did not have all to do with their failure to succeed—in fact, in several cases the larger contributing factors were external to this field—yet the methods pursued by some of these concerns were such as to invite disaster. Probably the greatest weakness among these mushroom concerns was the development of an overhead out of all proportion to the business turnover. Instead, they should have begun in a modest way and branched out as a trained personnel and increased business warranted.

IMPORTANCE OF PERSONNEL

Personnel constitutes 70 per cent of success in China. In America the individual is far more a part of a vast machinery of organization than in China. The bulk of China's foreign trade is handled through foreign or non-Chinese concerns in the field. The 1,500 men who comprise the aggregate of America's male mercantile population in China hold relatively more responsible positions and are individually greater factors to success or failure than would be a similar number holding positions of corresponding importance in the United States for the following reasons:

1. The superimposition of extraterritoriality upon Chinese society by certain treaty powers places the nationals of these powers and the properties which they control beyond the scope of Chinese law and courts, thereby creating a situation pregnant with responsibilities and opportunities.

2. China is now in process of transition, passing from an individualistic or family unit to a modern corporate society. Until

a modern economic society becomes an accomplished fact, the ingenuity of foreigners having relations with the Chinese will continue to be taxed in meeting the adjustments necessary to the situation.

3. The success of the individual American is affected by the general success of American interests in China; hence the bigger and more effective the individual, the greater his contribution to the American community in China. On the contrary, if his concern is headed by a man of small caliber or is under the direction of a foreigner out of sympathy with America and American ideals, not only does the concern employing such a man suffer, but it reflects unfavorably upon all American interests in China.

4. With the great distance between the head office of a company in America and its representative in China, it becomes even more necessary that this representative be a high quality of individual, as the home office must depend upon his judgment in matters which can not advantageously be decided by men not on the ground or not thoroughly familiar with conditions in a field so different from the United States as is China.

5. American trade in China must meet international rather than national competition, hence the representative in China must familiarize himself with the methods of his international competitors, and must be prepared to attack problems arising out of this international competition.

6. Many American concerns destroy the usefulness of their representatives in China by unduly restricting their powers of attorney. Mr. Brown, of the International Bank of Shanghai, has the following comment to offer on this important subject:

In sending representatives to the Far East, the firm or individual in America should see that its representative is supplied with a power of attorney covering, as fully as possible, any eventuality which may arise in conducting the firm's business. It has been the experience of bankers in the Far East to find that even large firms at home send out representatives who carry with them powers of attorney which have only the most limited scope and which in some instances hamper their activities to a considerable extent. Not only does this reflect upon the representative, who when carrying a very limited power of attorney can not be looked upon as representing his firm as fully as he should, but also causes doubts in the mind of anyone who actually sees the power of attorney, and reflects on the firm itself for sending out a representative whom they apparently trust only to a very limited extent.

It would appear wise for any firm in America which is sending out a representative and which is supposed to do actual business to supply him with a power covering the following items: Opening of bank accounts; the ability to borrow; the ability to take and defend legal actions; the power of substitution and revocation; the power to buy and sell merchandise, rent offices, employ and dismiss assistants; and in all ways to give to the representative a document which will enable him to carry on the firm's business without embarrassment to him or his employees.

SALESMANSHIP

During the past 10 years important changes have been in progress in breaking down the old system of the comprador and substituting therefor closer working contacts between the foreign trader and Chinese dealers. At one time the Chinese comprador guaranteed all of the firm's transactions with Chinese dealers. To-day many of these compradors' guarantee : more than 25 per cent. It is

contended that the old-time Chinese merchant whose word was as good as his bond is no longer the general rule, and that greater vigilance is required of the foreign trader in his relations with Chinese dealers. The foreigner must become acquainted with the firms' customers and must arrange for inspection trips over territory covered by his Chinese salesmen. Conditions now require closer working contacts between the foreign trader in China and the Chinese customer. Unfortunately there is a tendency among some of the American and British merchants in Shanghai to cling too strongly to the old traditions and old ideas of dealing with the Chinese, shutting themselves off from contact with the Chinese, through the perpetuation of institutions and ideas which are rapidly becoming antiquated. Those who persist in these old-time ideas and methods are bound to suffer from the competition of those who cultivate a closer working contact with the Chinese business public.

SELLING SERVICE WITH GOODS

One of the promising opportunities for the American trader in China is the opening which is presented in the selling of service with goods. During the war years American plate glass captured the market in China. Had the American who controlled the bulk of this plate-glass trade during the war years accepted the situation he might have returned to the United States thoroughly convinced that China was no longer any place for him. In the transition from the old to the new order among the Chinese in the great commercial metropolis, he saw his opportunity in selling service with goods. Thus, instead of continuing in hopeless competition with European plate glass he offered to the Chinese shopkeepers of Shanghai the complete store front. He furnished plans and contracted to put in the finished product.

The time has not yet come when service in itself will command a market, but salesmanship which combines the idea of service stands a better chance to succeed than salesmanship without service. The Chinese, reared in a nonscientific environment and unaccustomed to modern industrial machinery and organization, while still unappreciative of the money value of engineering and organization counsel, finds that if foreign manufactured products are to give him satisfaction he must understand their use, hence the goods without the method of setting them up or of using them or keeping them in good running shape may be of little value to him. Furthermore, there are not as yet in China the facilities such as are developed in a western industrial society for repairs and for the furnishing of parts, or for the securing of independent expert advice, so that the Chinese buyer is obliged to depend upon the foreign salesman for advisory assistance.

REPRESENTATIVES

The American manufacturer would do well to proceed with care in intrusting the handling of his business in China to young Chinese who have not already succeeded in establishing themselves in business in their own country. Although China is in transition, yet it will for some time continue to be recognized as the land of fathers

and grandfathers rather than as the country of young men. Certainly it will be some years before the family system in China will be so adjusted as to accord the young men a position of independent responsibility, free from the entangling alliances of obligations to relatives. Furthermore, a man from one Province in China experiences difficulties in doing business with natives of other Provinces, a difficulty which does not confront the foreigner. Under the direction of a competent, experienced American, concerns in China are able to utilize the services of trained Chinese salesmen to an increasing extent.

Much good time and money have been wasted by American manufacturers in sending to China men whose main object in making the trip was their own personal satisfaction and enjoyment in visiting the field. The opportunity of seeing something of the Orient is often sufficiently enticing to prompt individuals to undertake the work of representing the American manufacturer on a tour through the Far East at what appears to be very reasonable terms to the concern represented. Through false promises, through superficial knowledge of conditions under which business is done, or through carelessness in attending to the details of individual transactions, such representatives often do more damage than good. In some cases the good name of a particular manufacturer has been ruined in a certain foreign field through the irresponsible acts of men ill qualified to represent an American concern. It is equally necessary to avoid the unscrupulous individual who solicits a number of connections with different manufacturers, especially the small manufacturers, to pile up sufficient retaining fees to give him an easy livelihood at the expense of others.

The properly qualified man in China or the man who makes the tour over the Far East in a successful way several times deserves far more consideration than some of the good men receive. To the man who is bent upon serving his house faithfully, what novelty he may have experienced upon the first tour rapidly falls into the background with repeated visits, and, in fact, some of the trips are taken under distinct discomfort. A representative of a manufacturer of pharmaceutical supplies recently made his fifth tour over China, visiting a number of mission hospitals and native drug dealers in places in the interior reached only by primitive methods of transportation and under much discomfort, involving days to cover distances which railways in America make in a corresponding number of hours. The results of this energetic and faithful representative's labors in China built up for the concern he represented a splendid name, and a business netting many thousands of dollars annually. The house could well afford to pay this man a bonus in addition to his salary and regular commission, for he has built for the future in his employer's opportunities in China.

The American manufacturer or jobber is often too hasty in placing his agency for China. Ordinarily speaking, China is for foreign-trade purposes divided into three general sections—North China, with headquarters at Tientsin; Central China, with headquarters at Shanghai; and South China, with headquarters at Hongkong. While some of the Tientsin firms cover Manchuria, yet if there is reason to work that territory more intensively, it would be well to

operate through houses in Dairen or Mukden for South Manchuria, and in Harbin for North Manchuria. In Central China, the great upper Yangtze region can best be covered from Hankow rather than from Shanghai, although under ordinary circumstances Shanghai houses generally cover the Yangtze region and sometimes also North China. South China is quite a distinct territory and is generally supplied from Hongkong, although for more intensive purposes houses at Canton can reach the trade in that populous and wealthy section more effectively. As for the coast ports, for special commodities more direct connections can be made by dealing with concerns located at Swatow, Amoy, and Foochow.

Care should be taken to refrain from granting a house an agency for a greater extent of territory than its facilities will permit it to cover effectively. Through inquiries directed to the Bureau of Foreign and Domestic Commerce at Washington helpful information may be secured as to the general reputation of firms. It is also well to ascertain the standing of the concern in the estimation of the Chinese trade, for in most cases the commodities handled must eventually find their way to Chinese dealers and consumers. For some unaccountable reason, some American manufacturers seem to labor under the delusion that in foreign trade the best method of procedure is to secure a foreign rather than an American house to handle an agency. Unless there are good reasons for doing otherwise, American manufacturers and jobbers would do well to make their connections in China through American houses already established there, or houses in the United States possessed of good marketing facilities in China.

The third question of importance in selecting an agent is the manner in which the commodity to be marketed fits in with those which this concern is already handling. Cases are known in which houses of presumably good reputation have accepted, in fact sought, sole agency rights for certain products with the sinister idea in view of keeping those products out of the market. There are, however, commission houses which handle quite effectively a number of different manufacturers' commodities of similar lines; for different Chinese dealers of the same lines of commodities often prefer to stock products carrying different trade-marks from those of their competitors. Some houses in China have taken on more agency connections than they can effectively operate. It is surprising how well some establishments apparently succeed in concealing the names of the American companies which they are presumed to represent. If the market possibilities warrant and the commodity in question is of such a character as to justify the arrangement, it may be best to have the agent take into his employ a salesman trained under the American manufacturer or with the jobber, as such a person will devote his energies to the sales of this particular product or set of commodities concerning which he is thoroughly familiar.

There are a number of houses in China which prefer to work on the basis of big profits on a small turnover rather than small profits on a large turnover, particularly so if it appears that a certain amount of pioneering work will be required to develop the larger market. American automobile accessories are in some cases held for much higher prices than should obtain, because the houses handling

them see chances of making big profits on small sales, thereby restricting not only the sales of these accessories but injuring the market prospects for the cars which require them.

KEEPING THE AGENT INFORMED

If the American manufacturer or jobber would get the most from his representative in China, he should keep him fully informed as to alterations in prices or commodities and as to other details important to a successful prosecution of the business in China. The manager of the export department of an American manufacturer of motor cars came to North China and found that the company's representative in that territory had not been on the company's mailing list for its latest catalogues and literature descriptive of its improved products. Some of these products were well adapted to the Chinese market. Furthermore, through helpful suggestions as to sales methods the export manager was able to increase his representative's sales very considerably.

A common cause for complaint is that manufacturers change the specifications of commodities ordered or substitute others without first securing the consent of their representatives in China. The Chinese buyer becomes accustomed to an article put up in a certain way, and unless educated to understand that a certain substitute is equally good or better or that the same product appears in a different sort of package he is suspicious that some one is trying to "put something over on him." Some years ago an American firm in Shanghai built up a nice business in a fancy toilet soap made in cakes of a certain specified size. Without any warning to the Shanghai firm, the American manufacturer, in response to an order for several hundred cases of this soap, took the liberty of shipping a lot slightly larger in size, justifying himself in that the price was the same; hence the firm in Shanghai would stand to gain rather than lose. In this case the extra size did not appeal to the Chinese dealer, for his customers for this particular brand of soap were high-class Chinese women, who were more concerned in securing a cake of soap which fitted their small hands and which was otherwise attractive than in securing more for their money at the expense of convenience in use. An American manufacturer of trunk fittings shipped to a China firm trunk center locks instead of rights and lefts, as were ordered. The dealer refused to take the center locks and the manufacturer refused to rectify his mistake, which he admitted.

SHIPPING IN ACCORD WITH INSTRUCTIONS

One of the very common causes of complaint in regard to American import trade with China is that the American exporters do not conserve the interests of the importer in China in complying with shipping instructions. Many a transaction which should have netted a neat profit to the Chinese importer terminated in an actual loss instead, solely because of the failure of the exporter to have met the shipping requirements. There are, unfortunately, a number of forwarding and express companies which exact charges out of all proportion to the burden the goods can stand. Cases have been cited in which forwarders falsified weights, measurements, and shipping

charges or added one-eighth to one-half of 1 per cent on insurance, both ordinary and marine. Steamship companies should be required to show on the bill of lading the exact weight and amount of freight charged, or bankers should refuse to accept documents in which the freight measurements and charges are not clearly stated. Some forwarding companies exact exorbitant charges where transshipments are involved. It is exasperating to the importer in China to order a bill of goods shipped by parcel post and to receive this shipment through some forwarding or express company, with charges assessed more than sufficient to eat up any possible profits on the transaction. Arrangements should be perfected whereby C. O. D. parcel-post transactions could be carried between the United States and China, the shippers paying return postage, which may be deducted or added to the C. O. D. charge. Other countries have such an arrangement.

An importer in China will often place an order with a jobbing house on the Pacific coast because of the advantage of fast shipping connections, only to be disappointed in having the order sent forward on a sailing subsequent to the one which might well have carried the goods.

The old, hackneyed subject of packing comes up constantly in criticism of exporters who refuse to comply with special instructions designed to bring the goods to the Chinese dealer in as good condition as they leave America. Of course, the well-established concerns give careful attention to the essentials of shipping and packing; otherwise they would never have achieved the distinction of being well established in their trade abroad.

A large American mail-order house built up a business of several hundred thousand dollars a year in China. The biggest asset of this concern was the scrupulous care which it gave to the filling of its orders. Each satisfied customer became a volunteer advertising agent for the company, and it must be said to the credit of the company that it had very few dissatisfied customers. Invariably goods were sent in accord with the specifications of the buyers, were intelligently packed, and were shipped at the lowest possible cost to the buyer. Breakages and losses in transit were credited to the customers.

ADVERTISING

There are certain lines of goods and certain commodities which depend for their successful introduction and sales in foreign markets upon an intelligent campaign of advertising. The successful marketing of these products in competitive fields requires some expenditure both for advertising and for selling. While it would be folly to make lump-sum donations for advertising in China unless one were fully assured as to the expenditure of this sum for the purposes in view, yet ways and means can be so devised as to get an effective check on both the character of the advertising and its effectiveness in the market where it is done. The agent in China should be able to furnish the American manufacturer with a detailed bill of particulars justifying expenditures made for the introduction and sales of the products of the company he represents. It is advisable that manufacturers and jobbers make reasonable allowances to their agents in China for properly advertising their goods.

SILVER EXCHANGE AND PRICES

China is on a silver-copper rather than a gold-standard basis. Furthermore, silver and copper in China are handled as commodities while also serving as mediums of exchange. The situation is further complicated in that units of currency vary in different places. Theoretically, the silver ounce by weight serves as the unit in silver transactions, but different communities have different scales—that is, there is a lack of uniformity in the ounces. Silver exchange enters very prominently into every import transaction. For instance, suppose an importer offers a Chinese dealer an American motor car at \$1,000 gold c. i. f. (cost, insurance, and freight) Shanghai. At the time the sale is made suppose that the Shanghai silver tael is quoted at 75 cents United States gold. This means that the Chinese buyer must produce the equivalent in silver of 1,333.33 taels to cover the \$1,000 gold. Suppose that three months later, when the car arrives in Shanghai, silver exchange had advanced to 85 taels, it would then be necessary to put up only 1,176.47 taels to cover. On the other hand, suppose silver had dropped to 65, then it would require 1,538.46 taels to meet the bill.

It is thus plainly evident that silver exchange has much to do with fixing the prices to the Chinese consumers. Where possible to do so, the importer would do well to arrange to sell his article at a fixed price in silver under a sliding scale of discounts to the trade on a basis of the fluctuations in exchange. In the main these discounts go to the jobber, but the retailer gets in on a certain share. The employees in a Chinese shop are numerous and receive little by way of actual wage considerations. At the end of the Chinese year they, however, receive a bonus based upon the profits made during the year, the funds from the sales of containers and samples, and discounts. The latter are distinctly helpful as an incentive to the salesman to boost the sales of the commodities carrying special discounts. Some importers have hit upon the happy device of limiting the number of jobbers through whom they deal to a definite number—say, 8 or 10. They contract with these jobbers to handle the article in question, fixing the price in local silver currency, and stipulating as to the proportion of discounts to go to each jobber. The agreement carries with it the stipulation that the retailers agree to sell at certain fixed prices and also receive a certain share of the discounts. In some cases the jobbers employ the salesmen, some of which are specially trained under the direction and at the expense of the importer or manufacturer. However, the nearer one can come to putting his article into the market at a price which will permit its being retailed over a given territory at a stated price in local silver currency, the better are his chances for success.

TRADE-MARKS

One brand of American condensed milk sells for 20 per cent more than any other condensed milk in the market, yet holds nearly 90 per cent of the trade. This is due to the fact that it established its trade-mark and that through this trade-mark it has come to be recognized as a superior product, in spite of the fact that other equally good brands are offered at 20 to 25 per cent below the market price

of the favorite make. The manufacturers of this brand have over a period of many years zealously safeguarded their trade-mark against frequent efforts upon the part of others to imitate.

Many years ago a certain brand of American underwear was sold to the extent of 500 cases a week. It became known throughout the length and breadth of the land. Because of the failure of the manufacturers to protect their trade-mark, an imitation gradually displaced the original American product. The Chinese Government recently enacted a trade-mark law. Although not formally recognized by certain of the treaty powers, yet the foreign traders in China are gradually registering their marks under this law. Registration under this law can be arranged through American attorneys at law resident in China.

SERIOUS EFFORT NECESSARY

A prominent merchant associated with a very large concern in China maintaining a big organization throughout the interior of the country made the statement that China is no place for the "piker." On the other hand, he stated that, provided a man has an article or idea which can commend itself to the Chinese people or which is suitable to conditions in China, there are big opportunities, with proper financial backing, for profitable business. As he stated, there is enough new about the field, and it possesses so much in the way of development potentialities, that with the proper backing, coupled with a carefully selected personnel, it is possible to build up a business with greater prospects of expansion than in almost any other field. One strikingly interesting phase of China is the increasing consumption of the Chinese masses.

However, it is highly necessary that previous to embarking upon any enterprise in China one make a careful and intelligent survey of the field, utilizing all possible agencies which may be helpful in this connection. It is well here to take cognizance of the fact that the United States Department of Commerce maintains an organization in China, under the direction of its commercial attaché, with offices in Shanghai, Peking, and Canton, and that this service is at the command of American business men, who would do well to utilize and investigate the character of the services which this organization is prepared to render. Also the department's Bureau of Foreign and Domestic Commerce in Washington, D. C., has published much material concerning China and is prepared to answer inquiries from those interested in marketing in this field.

INCORPORATION OF AMERICAN FIRMS IN CHINA

Assistant Trade Commissioner A. Viola Smith, Shanghai

American commerce with China was originally carried on by supercargoes traveling aboard clipper ships of the day. Canton was their port, and with the development of the trade there followed as a natural sequence the establishment in Canton of resident agents, commission houses, and direct representatives of firms having their headquarters in America. By 1815 these changes in the development of mercantile channels had practically eliminated the supercargo.

AMERICAN ENTERPRISES IN CHINA

The first American concern established in Canton to engage in the commission business was inaugurated by Shaw and Randall, both formerly supercargoes. The death of Shaw soon dissolved the firm, but other American enterprises quickly followed. The outstanding American house of its time was that of Samuel Russell & Co., a partnership established in 1818 by Russell, Ammidon, Edward Carrington, Cyrus Butler, and B. and T. C. Hoppin, of Providence. Later reorganized under the name of Russell & Co., this firm came to occupy a financial position in China comparable with that of famous British firms of the day.

Tyler Dennett describes this period of American enterprise in China in his *Americans in Eastern Asia* thus:

Olyphant & Co. at Canton was organized in 1828 out of the ruins of the firm of Thomas H. Smith by D. W. C. Olyphant, who had served an apprenticeship in New York, Baltimore, and then in Canton as the supercargo and agent of Smith. This firm came to occupy a position second only to that of Russell & Co., until Augustine Heard, leaving the Russell firm, established the house which long bore his name. The only other important firm was that of W. S. Wetmore. It is significant that out of the much larger number of American merchants who came to and departed from Canton only these firms—Russell, Olyphant, Heard, and Wetmore—survived the competition of decades. Some, like John C. Cushing, retired with wealth; others failed grandly and left only pitiful derelicts.

The effect of this consolidation of American interests was to stabilize business and to increase the influence of the surviving merchants in their dealings with both the Chinese and with the other foreigners.

What has become of the firms of Russell, Olyphant, Heard, and Wetmore, which played such an essential part in the foundation of American trade in China? Russell & Co., the strongest, survives to-day in the form of a British partnership operating under the name of Shewan, Tomes & Co. This British company was organized in 1891 out of the ruins of Russell & Co. when the American firm went on the rocks overnight in a huge sugar-exchange transaction. Another split off from Russell & Co. is the Yangtze Insurance Association (Ltd.), a British company with its head office in Shanghai. Originally founded in 1862 by the American firm, it changed to British registry in 1883.

The old Canton firm of Wetmore & Co., established in that city during 1832, had branches in Valparaiso, New York, and Shanghai, trading under the name of Wetmore, Cryder & Co., and owned its own line of clippers. It claimed to have brought the first shipment of American petroleum into China during the early sixties. Its present-day descendant, Frazar & Co. (Ltd.) assumed British nationality during 1924, and now operates as a British-China company organized under the Hongkong companies ordinances, which are extended by orders in council over British persons resident in China through the long arm of extraterritorial privileges.

Olyphant & Co. has long since dropped out of existence. The only trace of it to-day is found in the British firm of Wisner & Co., originally established by two American employees of Olyphant & Co.—Wisner and Seamon—after the parent company had suffered reverses and had gone out of business.

Heard's enterprise, so highly spoken of by Tyler Dennett, seems to have been lost in the vicissitudes of those ever-changing conditions through which mercantile interests in China have passed from the opening of trade with Canton.

The strength of America's position in the trade of these earlier days is cogently brought out by Dennett in these words:

American trade with Asia was begun without the direct assistance of any others than Americans and made its way, needless to say, in the face of no inconsiderable opposition from British competitors, notably the East India Co.

British interests in the Far East have enjoyed a continuity of commercial policy which American interests have not possessed. During the World War years of 1914–1919 American interests were, owing to the favorable position of the United States as a producing nation, able to operate without feeling too severely the burden of home taxation. The postwar years of readjustment and the reentry into the China field of products from Great Britain, France, Germany, and other European countries, coupled with Japan's increasing activities, brought about such strong competition that American interests were forced to analyze from every angle the advantages held by their competitors. They found that their British competitors, for instance, organized and operated under the provisions of the Hongkong companies ordinances, were free from the burden of home taxation other than the payment of a nominal annual license fee. In the "language of the dollar" this meant that a British company in China holding an American agency could sell American products for 1½ per cent less than the identical products could be quoted upon by an established American trading company in China. The difference proved entirely attributable to the disparity between the home taxations exacted by the respective Governments of these nationals.

No other nationals operating in China have been so taxed by their home Governments as Americans. Japanese business interests, for example, are free from home taxation so long as they reinvest their profits in enterprises outside of Japan. This accounts, in a large measure, for the enormous industrial investments which the Japanese have made in recent years in various parts of China, notably at Shanghai, in the cotton and weaving industries. The Germans, French, and other European nationals operating in China are like-

wise lightly taxed and are particularly free from home-taxation burdens.

China's income tax law, promulgated by presidential mandate, on January 11, 1914, effective January 1, 1921, applies to companies organized under Chinese law, and as such is not a taxation liability with which foreign interests are concerned so long as they are organized under their own laws and enjoy the privileges of extraterritoriality.

The first measure of relief accorded American interests from Federal-taxation burdens was in the passage of the China trade act of 1922. Unfortunately the act fell short of its contemplated aims, and it was not until the passage of certain amendments during February, 1925, that it provided American interests in China with a favorable incorporating medium which would somewhat equalize their position in competition with other nationals.

AMERICAN CORPORATIONS

American corporate entities have, for the most part, conducted their business in China under the laws of the respective States in which the parent organization in America was incorporated or by forming in China a corporation under the laws of a particular State. This procedure was made possible by the acts of Congress of 1848 and 1860, which extended the laws of the United States of America over all American persons resident in China, in pursuance of the treaties granting to American citizens extraterritorial rights in China.

Before going into the methods of incorporation which have been and are now open to American companies desiring to operate in China clear distinction should be drawn between "China" and "Hongkong." The term "China" includes the 18 principal Provinces and Manchuria, Mongolia, Chinese Turkestan, and Tibet. It does not include the territory of Hongkong, the latter having been ceded by China to Great Britain in 1841. Hongkong, therefore, is a British Crown colony, quite apart from China. As a British Crown colony Hongkong has its own set of incorporation laws (known as the Hongkong companies ordinances), its own trademark and copyright laws, and is in every way governed distinctly apart from China.

Congress, in enacting the China trade act of 1922, defined China as meaning "(1) China, including Manchuria, Thibet, Mongolia, and any territory leased by China to any foreign Government; (2) the Crown colony of Hongkong; and (3) the Province of Macao." A recent case in the United States Court for China may or may not be significant, if at some future time this court should be called upon to determine judicially the application of the China trade act of 1922 in the territory of the "Crown colony of Hongkong, the Province of Macao, or any other territory leased by China to any foreign Government." In the case, *United States v. Arthur W. Smith*, the United States commissioner ruled, during the latter part of 1923, that the United States Court for China had jurisdiction over American persons in the Japanese leased territory of Dairen, on the principle that China, once having granted within the limits of her sovereignty extraterritorial privileges to the United States, could not

at some subsequent date enter into a contract with a third party as a result of which the contractual obligations to the United States could be modified without the consent of the latter. On March 2, 1925, the ruling of the commissioner was reversed by Judge Milton D. Purdy, of the United States Court for China, who granted a motion to quash the case, the court taking occasion to state that "the basic reason for American extraterritoriality in China was to overcome the necessity of American citizens appearing before Chinese tribunals. Hence, with the withdrawal of China from the Dairen area, the need for extraterritorial rights for American citizens in the Kwantung leased territory automatically ceased."

This reversal of the commissioner's decision by Judge Purdy, while perhaps disposing of the issue in the case considered, can not be said to settle definitely the general principle involved. In view of the complexity of the entire extraterritorial situation in China, it is probable that the principle involved in the above case may have eventually to be carried to the United States Supreme Court for determination.

COURSES OPEN TO AMERICAN INTERESTS

The following courses have been or are now open to American interests for the formation of companies to operate in China:

State laws.—Organizing under the incorporation laws of whatever State of the American Union the company might elect. This method of organization is still available.

Alaskan Code.—The incorporation provisions of the Alaskan Code, known as the act of Congress of March 2, 1903, were recognized as being applicable to this jurisdiction by the United States Court for China during March, 1917. This method of incorporation was availed of by 163 American firms. A court order of July 5, 1924, temporarily discontinued this method, and an amendment to the China trade act passed during February, 1925, prohibits further incorporation under the act of Congress of March 2, 1903, which has been used as the Alaskan Code incorporating law.

Hongkong companies ordinances.—During 1911–1919 a certain amount of American capital found it advantageous to operate under these ordinances. Subsequent amendments during 1919 and 1921, making it mandatory that such companies should be British controlled and managed, tended to discourage this form of organization for American interests. However, considerable American capital to-day is using this method of incorporation.

China trade act.—Incorporation under the provisions of the China trade act of 1922, enacted by Congress during September of that year, and amended during February, 1925, for the special purpose of giving to American enterprises a Federal incorporation law for the incorporation of American companies to operate "within China."

There exists in China a corporation law known as "China's corporation regulations," which were promulgated by presidential mandate on January 1, 1914. A prominent Chinese attorney of Shanghai with western education, in commenting upon this piece of Chinese legislation, stated: "It is very unsatisfactory as a piece of legislation, as it contains so many contradictions and cites so much detail, while the broad principles of corporation or partnership law

as we know it in the West are not properly stressed and are indistinctly defined. While the English translation calls it 'corporation regulations,' it is, strictly speaking, of much broader application, as it purports to govern partnerships and joint-stock companies, as well as limited companies, and the title is better rendered 'Chinese companies ordinances.'"

The law itself makes no reference to investment by foreigners in Chinese companies, but the rules of enforcement state: "According to law only Chinese subjects are allowed to form limited companies with shares." It might, therefore, be inferred that if papers relating to a proposed company formed wholly or in part by foreigners were presented to the Chinese authorities they would refuse to register the company. On the other hand, there appears to be nothing to prevent foreigners from taking shares in a Chinese company when it is once established.

The Chinese mining law prohibits foreign participation to a greater extent than 50 per cent. Japanese mining interests, as well as several other nationals, have organized companies with part Chinese ownership, which permits them to operate outside of the treaty ports under special charters or concessions. Theoretically, foreigners can not hold land in China outside of the treaty port limits. In actual practice this problem is solved in several ways. Willoughby's "Foreign Rights and Interests in China" presents an excellent outline of landholding both by Chinese and by foreigners for anyone who desires specific details on this point.

Generally speaking, however, foreign capital has not organized under the provisions of China's corporation law owing to the advantages which the respective foreign nationals enjoy by organizing under their own national laws so long as extraterritoriality prevails. Chinese interests also have, in some instances, organized under the provisions of various foreign laws in order to be relieved of the exactions of their own laws.

INCORPORATION UNDER STATE LAWS

This method is still in vogue and the majority of American corporations in China to-day are either operating as branch offices of their respective parent organizations or have organized in China under the laws of some specific State of the Union. The States in which such companies are usually incorporated are, of course, Delaware and New Jersey; yet we find American interests trading under charters from practically every State in the Union, as well as the laws of the Philippine Islands.

American interests in China desiring to incorporate under a particular State law proceed through appropriate legal counsel in a similar manner to which they would go about the formation of such a company in America.

INCORPORATION UNDER ALASKAN CODE

The United States Court for China, which was established by act of Congress in 1906, ruled in March, 1917, that the Alaskan Code incorporation provisions, known as the corporation act of Congress of March 2, 1903, were applicable in this jurisdiction.

The first charter under the provisions of the Alaskan Code was granted to the American Sales Co. on March 28, 1917. The legality of the application of this act of Congress of 1903 was tested in the case of the United States *ex rel.* Raven *et al.* *v.* Paul McRae, brought during June, 1917. The court not only held that the law was applicable through the extension of the United States laws by the acts of Congress of 1848 and 1860, but further stated that this corporation act of Congress of March 2, 1903, appeared to be suitable to conditions in China and necessary to execute the treaties. Subsequently, 163 companies were granted charters under this act of 1903 by the United States Court for China.

On July 5, 1924, the Hon. Milton D. Purdy, judge of the United States Court for China, issued the following order:

On and after this date all applications, and a draft of the articles for the incorporation of American companies under the provisions of the District of Alaska Code, will be submitted to the court for its inspection and determination prior to any filing thereof.

Although no official announcement has been made as to the reason for this order, it is generally understood that this step was taken owing to the fact that during September, 1922, Congress had enacted a special law for the incorporation of American companies to operate in China, known as the China trade act. The order was therefore tantamount to forcing a test case on mandamus proceedings, which would once and for all determine whether the act of March 2, 1903, was correctly construed as applicable to this jurisdiction to meet the exigencies of American commerce; and if so, whether it was repealed by the enactment of Congress of the China trade act of 1922, when the latter act failed to contain a specific repealing clause.

Suffice it to say that since this order of July 5, 1924, was made no further applications have been filed for incorporation. Three instances are known in which American interests desirous of incorporating under these provisions approached the court with the idea of incorporating, but in view of the above order they did not care to make a test case and made other plans. Two of these cases went no further with their plans for incorporation, and the third perfected its organization under the form of a common-law trust.

Amendments to the China trade act passed during February, 1925, provided that:

SEC. 29. Hereafter no corporation shall be created under any law of the United States extended over citizens of the United States in China, for the purpose of engaging in business within China.

This amendment, in effect, limits and discontinues further incorporation of concerns in China under the act of Congress of March 2, 1903, commonly termed the Alaska Code. In effect it amounts to the same as a repealing clause, which was omitted from the original China trade act of 1922.

INCORPORATION UNDER HONGKONG COMPANIES ORDINANCES

From 1911 to 1919 a considerable amount of American capital took advantage of the incorporation provisions of the Hongkong companies ordinances. Subsequent amendments to these ordinances, first in 1919, requiring that a majority of the directors must be British subjects, and a later amendment in 1921, providing that the

managing director must also be a British subject, tended somewhat to discourage American interests from extensively using this means of incorporation for business in the Orient.

By the exercise of extraterritorial treaty rights these Hongkong companies ordinances have been extended through British orders of council over British persons resident in China, thereby permitting the formation of what are known as British-China companies. There is still a certain amount of American capital finding its way into these British companies, owing to the more favorable and flexible facilities which these ordinances provide for the conduct of mercantile business in China, but primarily because of their tax-exemption features.

THE CHINA TRADE ACT

Agitation for a Federal incorporation law was begun early in 1918 by American commercial organizations in China, using as their medium of expression the American Chamber of Commerce of China and the Seattle Chamber of Commerce. A committee of the former chamber, in cooperation with the Hon. Charles Denby, then a member of the United States War Trade Board, who was touring China on a special investigation of conditions affecting the development of American trade, prepared the first draft of a bill which later became the foundation for the present China trade act.

Through the energetic interest of Congressman L. C. Dyer, the first bill (H. R. 7204) was introduced in Congress during July, 1919. Legislative procedure consumed the greater part of two years before the final enactment by Congress of the China trade act of 1922, approved September 19, 1922, gave to American interests a uniform Federal incorporation law for the purpose of engaging in business within China.

The primary purposes contemplated by the original draft of this legislation, in addition to securing a uniform Federal incorporation law, were:

(a) To place American interests, from the standpoint of home corporation and individual income taxation, on an equality of opportunity with other nationals doing business in China.

(b) A means of inducing Chinese capital to participate with American capital in undertakings in China under American management.

The original draft was designed to give corporate as well as individual income-tax relief to American interests operating in China. The various legislative stages through which the original passed before enactment by Congress succeeded in modifying its primary intent to such a degree that the final law of September 19, 1922, fell short of according the relief originally designed to put American interests in China upon an equal footing with their competitors. This deficiency was succinctly brought out in an editorial appearing in the November, 1922, issue of the British Chamber of Commerce Journal, which is the authoritative organ for British interests in China.

* * * and while the effect is not to bring about the same complete freedom from income tax which British firms carrying on business in China enjoy,

American concerns carrying on business in China which are in a position to avail themselves of the provisions of the act will be relieved, partially at least, from a handicap to which they have hitherto been subject in competing with British firms.

In addition to making the act more workable and useful from the standpoint of administration, the amendments as enacted by Congress in February, 1925, correct to a considerable extent the taxation deficiencies of the original law of 1922.

Although a number of suggestions were made for widening the scope of business in which China trade act corporations might engage, no amendments were recommended to Congress along these lines. It was felt that a sounder policy would be to recommend only such amendments as would correct the deficiencies of the original act. Such procedure would afford an opportunity to demonstrate the merits of the primary purposes of this legislation. If the future shows it desirable and permissible to widen the scope of business, this can be done, based on practical experience by the actual working of the law.

SYNOPSIS OF REQUIREMENTS

The brief outline given below of the requirements of the China trade act of 1922 as amended February 26, 1925, is intended for the layman as a matter of quick reference. Persons desiring to organize under the provisions of this law are advised to make a detailed study of the full text of the law, which will be found in the appendix.

Character of business.—A District of Columbia corporation may be organized under the provisions of the China trade act for the purpose of engaging in business within (1) China, including Manchuria, Tibet, Mongolia, and any territory leased by China to any foreign Government; (2) the Crown colony of Hongkong; and (3) the Province of Macao, except that such corporations are not permitted to engage in any form of (a) banking business; (b) insurance business; (c) shipping business, unless controlling interest is owned by citizens of the United States, within the meaning of section 2 of the shipping act, 1916, as amended.

Purpose.—The corporation must "aid in developing markets in China for goods produced in the United States."

Incorporators.—Three or more individuals, a majority of whom must be American citizens, may incorporate.

Directors.—Directors are of two classes:

(a) Temporary. Incorporators must name at least three individuals, a majority of whom at the time of designation and during their term of office are citizens of the United States, to serve as temporary directors.

(b) Permanent. Not less than three, a majority of whom and the president and treasurer must be American citizens resident in China.

Offices.—Offices must be located as follows:

(a) The principal office must be located in Washington, D. C., which may be accomplished by maintaining an accredited agent in that city to accept service.

(b) Head or branch offices may be located in such places in China as corporations deem advisable.

Name and seal.—The name of the corporation must end with the legend "Federal Inc., U. S. A." No individual, partnership, association, or corporation not incorporated under the China trade act or under a law of the United States shall engage in business within China under a name in connection with which the legend "Federal Inc., U. S. A." is used. Any person violating this provision shall upon conviction be fined not more than \$1,000 gold for each violation thereof.

A corporate seal is mandatory, and may be altered only upon the approval of the Secretary of Commerce.

Shares.—Shares shall be issued at not less than par value; 25 per cent of the authorized capital must be paid in cash or real or personal property placed in the custody of the directors before certificate of incorporation will be granted.

Taxes.—China trade act corporations are now completely exempt from the Federal income tax of 12½ per cent on their taxable income. This exemption takes the form of a special dividend, which must be declared and distributed prior to March 15 after the close of the calendar-year business on December 31. Alien shareholders (other than Chinese) who do not reside in China, the United States, or possessions of the United States are not entitled to this special exemption dividend.

China trade act corporations pay in full the capital-stock tax of \$1 gold on \$1,000 gold of the capital-stock value.

Stockholders of China trade act corporations are exempt from income taxes on dividends from China trade act corporations when such stockholders are resident in China.

Fees.—The following fees are required: (a) Certificate of registration (sec. 5), \$100 gold; (b) certificate of property value (sec. 8), \$300 gold, maximum; \$25 gold, minimum; (c) certificate of amendment of articles of incorporation, \$100 gold; (d) certificate of authority for dissolution, \$100 gold.

Registration fees shall accompany each application, except that for property value, which is payable before issuance of certificate. Fees are collectible by the registrar or the Secretary of Commerce. All fees are payable in United States gold currency, either at Shanghai, China, or Washington, D. C. Drafts are to be made payable to Treasurer of the United States.

Documents to be filed on registration.—There must be filed copies of the application, in triplicate, supported by:

(a) Minutes of meeting adopting articles of incorporation.

(b) Certificate by secretary of meeting regarding adoption of articles of incorporation.

(c) Certificate of naturalization from all incorporators who are naturalized American citizens.

(d) Certified copy of articles of incorporation signed by and acknowledged by incorporators.

(e) Certificate of property value, when shares are paid for in real or personal property in accordance with section 8.

Applications originating in China shall be filed with the Registrar of the China Trade Act at Shanghai, China. Applications originating in the United States may be filed direct with the Secretary of Commerce.

Permanent organization.—A majority of the directors shall call, within six months after the issuance of the certificate of incorporation, a stockholders' meeting, for which 90 days' notice has been given, for the purpose of adopting a code of by-laws and effecting a permanent organization.

Stockholders' meetings.—The following questions shall be determined only by the stockholders at a stockholders' meeting:

1. Adoption of by-laws.

2. Amendments to the articles of incorporation or by-laws.

3. Authorization of the sale of the entire business of the corporation or of an independent branch of such business.

4. Authorization of the voluntary dissolution of the corporation.

5. Authorization of application for the extension of the period of duration of the corporation.

The adoption of any such amendments or authorization shall require the approval of at least two-thirds of the voting shares. No amendment to the articles of incorporation or authorization for dissolution or extension shall take effect until (1) the corporation files a certificate with the secretary stating the action taken * * *; (2) such amendment or authorization is found and certified by the Secretary of Commerce to conform to the requirements of the act.

Subsequent documents to be filed with registrar.—Other documents to be filed are:

(a) Certified copies of all by-laws and amendments thereof.

(b) Certified copies of minutes of all stockholders' meetings of the corporation.

(c) Annual report subscribed under oath by secretary of corporation, supported by: (1) Minutes of stockholders' meeting approving balance sheet; (2) certified copy of balance sheet; (3) detailed statement of profit and loss; (4) statement of the distribution of profits; (5) changes in list of stockholders during the year.

Powers of the registrar.—The Secretary of Commerce is authorized to designate as Registrar of the China Trade Act an officer of the Department of Commerce, whose official station shall be located in China.

The registrar has the power to:

(a) Investigate the affairs of any corporation organized under the act.

(b) Institute proceedings in the United States Court for China for the revocation of the certificate of incorporation issued to a China trade act corporation.

(c) Subpoena witnesses to appear before him and produce any books, papers, or accounts relating to the business of the corporation.

(d) Require the taking of depositions relating to a corporation organized under the act before any designated person having power to administer oaths.

(e) Administer oaths.

(f) Examine and copy, or cause to be examined and copied, any book, account, record, or paper or correspondence relating to the business or affairs of a China trade act corporation.

Any person who upon demand refuses the registrar or any duly authorized officer, employee, or agent such access or opportunity to copy, or who hinders, obstructs, or resists him in the exercise of such right, shall be liable to a penalty of not more than \$5,000 gold for each such offense.

Trustees.—In the case of voluntary dissolution of a China trade-act corporation or revocation of its certificate of incorporation, the directors of the corporation shall be trustees for the creditors and stockholders of the corporation, except that upon application to the United States Court for China by any interested party, * * * the court may in its discretion appoint as trustees such persons, other than the directors, as it may determine. Trustees may sue and be sued in the name of the corporation and are jointly and severally liable to the stockholders and creditors of the corporation to the extent of the property coming into their hands.

Penalty for false statements.—No stockholder, director, officer, employee, or agent of a China trade act corporation shall (1) make any false statement as to the financial condition of the corporation, or (2) publish any written statement or advertisement in any form stating the amount of the authorized stock without also stating as the amount actually paid in a sum not greater than the amount paid in. Any person guilty of violating these provisions is subject to a fine of not more than \$5,000 gold or to imprisonment for not more than 10 years, or both.

Suits.—Suits may be brought against a China trade act corporation in the United States Court for China, or in the Supreme Court of the District of Columbia, or in the Federal district court for any district in which the corporation has an agent and is engaged in doing business.

[For further requirements of the China trade act, 1922, as amended February 26, 1925, refer to the appendix.]

UNINCORPORATED COMPANIES

American business is also carried on in the nature of sole proprietorships and partnerships. The operation of such businesses are governed by the laws of the United States. That is to say, if an individual or a partnership were sued on a breach of contract and brought before the United States Court for China, the procedure and decision of the court would be controlled by the laws of the United States on contracts, as extended over American citizens in China by treaty.

CONSULAR REGISTRATION

Although not compulsory, the Department of State urges all American citizens, institutions, and corporations to register annually

with the American consular officer in whose district they live or operate. The object of this registration is to facilitate the protection of American interests on the part of the agents of the United States Government. Forms for registration may be had upon application to the nearest American consulate.

Registration of American citizens.—American citizens should appear personally at the nearest consulate to register, submitting proof of citizenship. If residence is outside of the city in which the consulate is located, application for registration may be made by mail, and the necessary forms will be sent for execution.

Registration of American partnerships and corporations (other than China trade act corporations).—Prescribed regulations of the Department of State require the following:

1. Partnerships. An authenticated copy of the partnership agreement and a sworn statement showing the names, nationality, and residence of the members of the partnership and the extent of their respective financial interests must be filed with the American consular officer.

2. Corporations. Applicants for registration of an American corporation are required to furnish an authenticated copy of the article of incorporation and a statement, under oath, showing the names, nationality, and residence of the officers, directors, and stockholders, and the extent of their respective financial interests.

Applicants for registration must show to the satisfaction of the consulate that a substantial American financial interest exists; that a corporation maintains an American officer or agent in China; and that a partnership is represented in China by an American partner or agent for purposes of service of judicial process.

The mere fact of registration has no significance as to the nationality of the enterprise but is merely a recording of alleged facts as to the nationality of the persons concerned in the registered enterprise, and does not necessarily imply that the enterprise is entitled to diplomatic protection or the intervention of the United States Government. The measure of protection to be accorded in such cases is to be determined in each case as it arises.

Registration of China trade act corporations.—The regulations of the China trade act, 1922, provide that copies of the certificate of incorporation when issued by the Secretary of Commerce are to be filed with the American Legation at Peking; and with the consular officers for the districts in which its main and branch offices or agencies in China are situated. These copies are filed through the office of the registrar, located at Shanghai, China. Such certificates of incorporation are accepted by consular officers in lieu of, and as the equivalent of, the particulars mentioned above, which are required for the registration of other American business enterprises.

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CURRENCY, EXCHANGE, AND BANKING¹

By Commercial Attaché Julian Arnold

CURRENCY

Except for comparatively brief periods in its long history, China has adhered to a specie basis; even during the World War the country did not resort to fiat money. The metallic currency of China serves as both a commodity and a medium of exchange. Efforts toward making subsidiary coinage token have not yet met with success. China's currency is probably the most complicated in the world. Some of the factors contributory to this condition are: (1) Lack of a strong centralized system of government, and a *laissez faire* policy permitting separate communities to develop actual standards of weights and measures different from those of other communities; (2) a family or clan system of social organization, with the people rooted to the soil, thereby making for immobility among the masses and encouraging local provincialisms; (3) bad internal communications in a country of vast areas and distances, discouraging internal intercommunication; (4) a system of trade and provincial guilds which developed distinctive customs and practices among certain trades and peoples of certain sections; (5) the persistence up to the beginning of the twentieth century of a medieval economic condition in agriculture, industry, and trade; (6) a lack of appreciation by the Chinese Government, until after the establishment of the Republic, of the underlying principles of a national system of legal-tender currency; (7) following the revolution of 1911 the breakdown of the central government authority over the Provinces, resulting in the use by military governors of provincial mints for issuing debased coins for the production of revenue.

VARIETIES IN USE

Brass or bronze cash.—This money (Chinese designation "ch'ien," meaning 1,000) was first coined in 1032 B. C. In 660 B. C. the cash took the form of a round coin about 1 inch in diameter with a round hole in the center; in 220 B. C. this round hole was replaced by a square. Each succeeding Emperor minted cash, inscribed upon which were the names of his reign and dynasty. Theoretically a string of 1,000 cash equals a Chinese ounce of pure silver, but exchange has fluctuated between 600 to upward of 2,000. These coins have been in use in China continuously down to the present day, but are now almost entirely replaced by copper 10-cash and 20-cash pieces.

¹ In view of the importance of this subject the Bureau of Foreign and Domestic Commerce has published a handbook on Currency, Banking, and Finance in China, prepared by Dr. Frederic E. Lee, formerly American economist consul in China and now a special agent with the Bureau of Foreign and Domestic Commerce.

Copper coins.—These were first coined in 1900 A. D. and are made in denominations of 10 and 20 cash, also in some places 200, 100, 50, and 5 cash. They were first intended as token money, with one hundred 10-cash pieces equivalent to a silver dollar, but they soon dropped to intrinsic values. In some places exchange has dropped as low as 300 to the dollar. It is estimated that there is the equivalent of more than 60,000,000,000 of these coins in circulation.

Silver tael.—A bimetallic silver-copper currency system was officially decreed about 700 A. D. The tael is a fictitious unit of silver currency, theoretically a Chinese ounce of commercially pure silver. (Tael is a word of Malay origin, the Chinese word "liang," meaning ounce.) Its weight ranges from 510 to 590 grains, depending on the scales used, also with varying standards of fineness. Over 200 different scales are known to be in use in silver-currency transactions. The tael is gradually being replaced by silver coins on a decimal basis.

Silver coins.—Dollars and subsidiary coins comprise this type of currency. Silver dollars were first introduced into China from Spain toward the end of the eighteenth century. During the latter half of the nineteenth century Mexican dollars were more extensively used than any other of the twelve or fifteen varieties in circulation during that period. In 1892 the minting of Chinese dollars was begun. In 1914 Chinese currency regulations were issued, fixing the Yuan or dollar as the unit of national currency, with token subsidiary silver and copper coins. Since 1914 the Yuan Shih Kai "Yuan" or dollar, minted at Tientsin and Nanking, has quite largely replaced the Mexican and other silver dollars. Subsidiary silver coins are depreciated and are accepted at eleven to thirteen 10-cent pieces to the dollar.

Paper currency.—Chinese money changers' notes preceded Government issues, which had their inception about 810 A. D. The circulation of notes of foreign banks is limited for the most part to ports in which these banks operate, except Japanese bank notes circulating in Manchuria. Bank notes are issued by numerous Chinese banks and provincial governments as dollar, small-silver coin, and copper-coin notes, but these issues are not always backed by adequate reserves for redemption; hence fluctuations in discounts of some issues have been very marked.

Gold (mostly bullion).—China produces but little gold, and gold coins have featured in a very limited way in China's currency system. Gold occupies an important position for hoarding purposes, particularly in the form of bullion, and often in the form of jewelry and gold leaf. Latterly, through a gold-bar exchange at Shanghai, heavy transactions in gold bars have become an important feature of China's financial market. These transactions are mostly speculative.

COPPER COINS

Copper has been the standard of currency of the masses in China for upward of 25 centuries. As early as 700 A. D., one tiao or complete string of 1,000 brass cash was nominally the equivalent of one Chinese ounce of commercially pure silver. Silver appreciated later, and one tael became the equivalent of 2,000 brass cash,

but the first Emperor of the Manchu Dynasty in 1644 inscribed upon the brass cash, minted under his direction, "Equivalent to $\frac{1}{1,000}$ liang," or Chinese ounce. Since then theoretically 1 Chinese ounce of commercially pure silver has been considered the equivalent of 1,000 brass cash. In 660 B. C. the brass cash appeared with a round hole in the center, and a few centuries later with a square hole. This was for the purpose of convenience in handling, so that they might be strung. Different practices developed in various communities; instead of 100 to a section of a string, 99, 98, 97, or 96 would be accepted as 100, the difference being allowed as a commission to the exchange shops. Furthermore, in some places small, worn cash of less intrinsic value would be allowed, within certain limitations, in the center of each string, these depreciated coins being acceptable for the purchase of certain designated commodities only. In spite of the fact that the Government decreed tampering with the nation's currency a capital offense, its authority over the entire country was not so administered as to prevent a considerable amount of counterfeiting. However, the low profit from manufacturing coins of such small denominations in itself probably assisted to prevent operations in this connection. Toward the close of the nineteenth century the expense of coining brass cash had advanced to such an extent that when Canton Province in 1900 coined copper 10 and 20 cash pieces, the central Government encouraged other Provinces to do likewise.

Shortly after the outbreak of the European war the unprecedented demand for copper led to the melting down of the brass or bronze cash of China and to its being shipped out in huge quantities. This paved the way for very considerable operations in the minting of 10-cash and 20-cash copper coins. The weakening of the central Government's authority over the Provinces after the revolution in 1911 gave the semi-independent military governors ample opportunity to take full advantage of the profits which might accrue to them through the extensive coinage of copper. Depreciated and light-weight coins added to the easily acquired wealth of military overlords; furthermore, they were able to take advantage of the market prices of copper. The country has been so flooded with copper coins that it is estimated that there are now in circulation in China in copper coins the equivalent of upward of 60,000,000,000 copper 10-cash pieces. They have superseded the brass or bronze cash, except in the more remote sections of the country, and even there their influence is very considerable. This has resulted in reducing their purchasing value to such an extent as to produce a serious situation with the masses who receive their wages in this currency, and prices in China have advanced, varying in different parts of the country from 50 to 300 per cent, because of this reduction in the purchasing power of the currency of the masses. China's imports of copper slabs and ingots for the five years, 1918 to 1923, aggregated 275,000,000 pounds, valued at 48,000,000 haikwan taels, or about \$38,000,000 United States gold.

SILVER

To a considerable degree the complexities of Chinese currency are due to the position occupied by silver. For 1,300 years the Chinese unit of silver currency has been the "liang," or Chinese

ounce, 16 of which equal a "chin," or "catty," of $1\frac{1}{3}$ pounds avoirdupois. To the foreigner, the liang is designated a tael. It is not a coin; it is merely a unit of weight.

For practical purposes the silver bullion is cast in ingots in the shape of a Chinese shoe, the standard size being approximately 50 taels, or ounces, Chinese weight. For convenience in use smaller sizes are cast, ranging from 1 to 10 taels in weight. However, in order to make the distinction between a tael of silver as a commodity and a tael of silver as currency, the latter incorporates the stipulation as to fineness. The situation would be comparatively simple if, in the currency of China, a tael of silver were a uniform measure of weight and a standard of fineness. Theoretically, the weight does not change. It is always understood to be an ounce of commercially pure silver. The scales change. Not only does every commercial community have its own scales, but many of the different trades have different scales. Those who are obliged to have transactions involving the use of different taels carry their own scales for comparative purposes. The scale determines the ounce rather than the ounce the scale. In some communities as many as 20 different scales are found in use. Thus, in reality, a Chinese ounce of commercially pure silver may range from 510 to 590 grains of actual weight.

A further complication comes with different standards of fineness, for, after the weight is settled, or rather scales are designated, it is then necessary to fix the fineness. Custom here also decrees certain qualifications for certain transactions or communities, but the variations in this direction are over a comparatively small range. In fixing exchange, the exchange shop marks the weight and fineness on the silver put out and stands responsible for its calculations. In some cities in South China silver dollars are accepted only on their individual intrinsic silver value, and shops through whose hands they pass chop or stamp them as a guaranty of their acceptance. Banks accept deposits also on this basis. These are known as "chop dollars."

To illustrate the method in actual practice in regard to the handling of silver currency, if 1 Tientsin tael is specified, it means 1 Hanping tael in weight of silver of "Hwapao" standard, 0.992 fine. The Hanping ounce simply refers to certain scales, but the "Hwapao" standard of fineness adds the qualification necessary to its service as a medium of exchange or a currency. Thus the generally recognized standard of Tientsin for commercial purposes is the Hanping-Hwapao tael, which contains 557.4 grains of silver of 0.992 fineness. Chinese exchange shops seem to be trained to recognize by the touch and sight the fineness of silver which for ordinary purposes is acceptable. They seldom apply the stone or crucible test.

In order to make for uniformity in the payment of customs dues at the different ports in China, the foreign powers stipulated by treaty a fixed currency for customs payments. The unit is the haikwan or customs tael. In practice, its weight varies from 581 to 589 grains, and theoretically it is 1,000 fine. In other words, the customs banks are responsible to the Government for a silver 1,000 fine; hence they are careful that the rate of conversion shall fully cover their liabilities. Singularly, the conversion rate for paying out customs money varies from one-eighth to one-half of 1 per cent from

that for receiving dues. This difference is considered the commission as compensation for the banks' expert knowledge, its risk, and its labor in handling silver of different degrees of fineness. One hundred haikwan or customs taels are equal to 111.4 Shanghai taels. The customs publish periodic rates of exchange for various currencies into the standard haikwan tael.

Accounts which require for settlement amounts smaller than 50 taels are handled with smaller ingots of silver ranging in weight from 1 to 10 taels. For fractional amounts of a tael, subsidiary silver and copper coins are used. Generally speaking, so far as the foreigner is concerned, tael settlements are usually bank transactions; thus he is not concerned with the details of payment in specie. In those sections where taels are in standard use some firms carry accounts with their banks both in taels and in dollars.

Gradually the fictitious tael unit of Chinese currency is being replaced by silver coins. In Canton the subsidiary or small-silver coin and the Hongkong dollar are current. In Peking the tael is no longer in use. During the first year of the Republic the Chinese Government abolished the tael unit from all Government books and transactions, adopting the new silver dollar throughout the country for taxes, for salaries, in railways and post offices, and for Government bond issues. The Chinese banks in Peking now carry their accounts in dollars. At a recent revision of the valuation schedules for duty-paying purposes in the Chinese customs, a resolution was passed calling for the payment of customs dues in silver dollars, as soon as China develops a standard silver dollar coin. Thus it is evident that the cumbersome and uneconomic fictitious tael unit of currency will doubtless be replaced by a silver dollar coinage on a decimal basis.

With no legal ratio between copper and silver, the exchange rate being controlled by the factors of demand and supply and by the customs of different communities and different trades, it was only natural that foreign traders in their relations with Chinese merchants should find it necessary to resort to something less cumbersome and less complicated than silver bullion and brass cash. Toward the end of the eighteenth century the Spanish Carolus dollars came into China from the Philippine Islands and soon became current in Sino-foreign trade transactions in Canton and later in other South China ports. As soon as the foreign powers could do so they fixed by treaty on a "constant" in silver currency for customs transactions in designating a customs tael. During the nineteenth century 10 or 15 different foreign silver dollars became current in trade circles in the treaty ports of China. Of all these coins the American trade dollar naturally became the most popular, owing to its superior silver content. For the same reason it was soon melted down or hoarded and thus disappeared. The Mexican dollar became the most generally used of all foreign coins introduced into China. In fact, in popular use it held the premier position during the latter half of the nineteenth century.

It is singular that as early as 1792 the Emperor Ch'ien Lung ordered the minting of silver dollars in Tibet. Apparently this arose from Tibet's contact with India. At all events, these coins were short lived and did not become current in other sections of China. It was not until a hundred years later that Chinese provincial mints

took to the minting of silver dollars and silver subsidiary coins. Several of these provincial silver dollars became quite common. However, the controlling factor in the use of all silver continued to be demand and supply. In other words, silver, whether in the shape of shoes or coins, was handled as a commodity as well as a medium of exchange. Each piece was accepted on the basis of its intrinsic worth but incidentally influenced by the inexorable workings of the law of supply and demand. Small or subsidiary silver coins, although nominally on a decimal basis of ten 10-cent pieces to the dollar, also followed the same rules, and the market quotations ranged from 10 to 13 to the dollar.

In 1914 we witnessed the first serious attempts on the part of the Chinese Government to establish a legal-tender standard system of currency. The Yuan or silver dollar was made the unit, with silver and copper subsidiary coins as token on a decimal basis. The dollars which became known as Yuan Shih Kai dollars were coined at Nanking and Tientsin. Following the death of Yuan Shih Kai, the weakening of the authority of the central Government over the Provinces interfered seriously with the carrying out of this scheme for currency reform, although the Chinese dollars have gradually forced the others from the market; for upwards of 80 per cent of the silver dollars in circulation in China to-day are undoubtedly Yuan Shih Kai dollars. These dollars are 89 per cent silver and 11 per cent copper alloy, with a gross weight of 0.72 Chinese ounce. This would mean a dollar of 370 grains of commercially pure silver, or 415.73 grains including alloy. The American silver dollar contains 371.25 grains of silver plus 41.25 grains of alloy, making the total 412.5 grains. During the World War the shortage and high price of silver led to the melting down of huge quantities of the foreign dollars in circulation in China, thereby paving the way for their easy replacement by coins of the Chinese mints. Thus while the new dollars are supreme, yet there are not sufficient guaranties of stability in the maintenance of a standard of weight and fineness to warrant the elimination of the tael in commercial transactions.

Military governors have taken advantage of the opportunities for adding to their revenues easy money through coining and putting on the market huge quantities of depreciated subsidiary silver coins. These efforts have been found far more profitable than attempts at putting upon the market depreciated silver dollars. Thus while the standard of the Yuan Shih Kai dollar has been fairly well preserved, the subsidiary currency has not become token, nor has its parity been maintained. In this connection, the Canton Mint has been the worst offender.

With the establishment of a central mint at Shanghai, under proper expert management, it was planned to prohibit the coinage of silver coins in other mints in China. A plant patterned after mints in the United States has been erected at Shanghai for this purpose, which would assure China the largest and most modern mint in the world. The Chinese bankers' associations, at a conference in 1924, undertook to underwrite a loan of \$3,000,000 silver, with the salt surplus and the mint as security, to provide necessary funds for the equipment of this mint, upon which \$2,500,000 had already been spent, also covered by a loan from the Chinese bankers. The Minis-

try of Finance virtually made a definite promise that if the Chinese banking group would take up this \$3,000,000 loan, it would be given full powers to manage the mint, including the appointment of a director. Unfortunately, the civil war of the autumn of 1924 interfered with the consummation of these plans.

China is not a silver-producing country, and yet it is one of the principal silver-using nations. During the past 12 years, imports of silver have exceeded exports by the equivalent of about \$400,000,000 silver. It is impossible to secure reliable estimates upon the amount of silver in circulation in China. Some bankers, presumably well informed, estimate the amount in dollars and sycee (bullion) at a minimum of \$500,000,000 silver, and a maximum of \$1,000,000,000 silver. The amount hoarded and used in the arts is estimated as equivalent to the quantity in circulation. Following the disturbances of the autumn of 1924, hoarding increased very considerably; in fact, Chinese banks have felt very seriously the strain of the withdrawal of deposits. The Shanghai banks' normal silver stocks aggregate about the equivalent of \$70,000,000 silver. They gravitate between a maximum equivalent in bullion and coins to \$110,000,000 and a minimum equivalent to \$35,000,000. [The section devoted to Foreign Exchange describes transactions in silver.]

PAPER CURRENCY

During the past decade the world has witnessed wonderful feats in juggling with the ciphers of paper currency. It has often been said that no matter what transpires elsewhere in the world, its counterpart can be unearthed from the pages of the history of this oldest civilization now extant. Marco Polo, in describing his wonderful discovery of the secret of the great wealth of Kublai Khan, the romantic Mongol ruler of China during the thirteenth century, remarked:

With these pieces of paper, made as I have described, he causes all payments on his own account to be made; and he makes them to pass current universally over all his kingdoms and provinces and territories, and whithersoever his power and sovereignty extends. And nobody, however important he may think himself, dares to refuse them on pain of death. And, indeed, everybody takes them readily, for wheresoever a person may go throughout the Great Kaan's dominions he shall find these pieces of paper current, and shall be able to transact all sales and purchases of goods by means of them just as well as if they were coins of pure gold. And all the while they are so light that ten bezants' worth does not weigh one golden bezant. * * *

Now, you have heard the ways and means whereby the Great Kaan may have, and in fact has, more treasure than all the kings in the world; and you know all about it and the reason why.

Among the causes which are cited as responsible for the downfall of the century of Mongol rule in China were the evils of an unredeemable and depreciated paper currency which drove the people into rebellion. To the first of the Emperors of the Ming dynasty, following the defeat of the Mongols, is attributed the remarkable feat of having placed the country's finances upon a sound foundation, through the resumption of specie payments. From that time down to 1853, a period of four and a half centuries, there were no Government issues of paper money. About the middle of the nineteenth century, copper cash and silver tael notes were issued without adequate reserves, with the result that by 1861 they fell in value

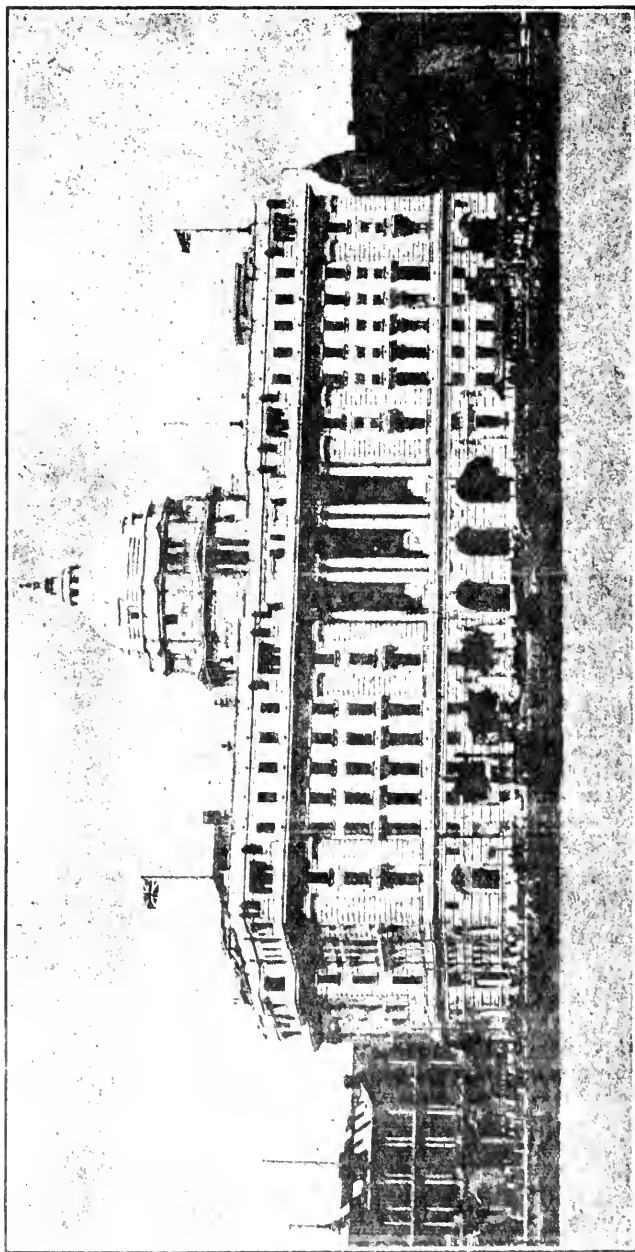


FIG. 5.—Hongkong and Shanghai Banking Corporation's building at Shanghai

to 3 per cent and soon thereafter passed out of circulation. Since then, and up to quite recently, paper instruments of credit were left to private banks and business concerns.

During the past 20 years, and more especially since the revolution of 1911, provincial note issues, with inadequate reserves, have not been uncommon. Military governors have used this expediency to tide over the embarrassments of depleted treasuries. Invariably the issues soon dropped to redemption values. Some communities, however, suffered severely upon this account. Hunan Province in Central China, has probably fared worse from unredeemed paper currency than has any of the other Provinces.

The issues of notes of certain Chinese banks have increased very considerably during the past 10 years, mainly because of the establishment of the branches of modern Chinese banks in the interior cities, where foreign banks have no branches. This condition accounts also for the decreased popularity of the notes of foreign banks, the circulation of which is confined for the most part to the cities in which they are located. In fact, these notes are designated for the cities in which they are issued, and when presented in other towns, even where the banks have their branches, are usually subject to a discount. On the other hand the military disturbances during the autumn of 1924 shook the confidence of a large part of the Chinese public in paper currency or bank credits, and silver came into demand for the purpose of hoarding. This seriously affected the available resources of the modern Chinese banks.

Of foreign bank notes in circulation in Manchuria, the Bank of Chosen (Korea) gold yen notes are in circulation to the extent of probably 100,000,000 yen. As the Japanese authorities operating the Manchurian Railway consider yen the only legal tender for railway purposes, this has done much to popularize Japanese currency, especially in South Manchuria. In 1912 the Japanese Government authorized the Bank of Chosen to issue its notes in gold yen currency throughout Manchuria. These notes were to be repayable either in bank notes issued by the Bank of Japan or in gold coin. The latter stipulation, however, applied only so long as Japan permitted the export of gold. Efforts have been made by the Japanese authorities in the Kwantung leased territory to establish a single gold yen standard, and the transactions of the Dairen Produce and Stock Exchange were ordered to be in gold yen. The Chinese protested, and finally both Chinese silver dollars and Japanese yen were admitted as acceptable for transactions on the exchange. Since September, 1924, the Japanese yen has depreciated about 20 per cent. This has caused the Japanese Government to abandon for the time being efforts to establish a single yen standard.

The greatest havoc in connection with the paper currency situation in China during the past 10 years has come with the provincial issues under the military governors, who have utilized them as a means of extorting revenues from the people. In reality, then, they may be considered a kind of enforced taxes. They are put out generally as copper-coin notes, so as to get the widest possible circulation. In fact, the people pass them along, retaining no more than necessary, so that when a crash comes no one is caught with large proportionate holdings, but in the aggregate the holdings have been such as to net considerable profits to the authorities responsible for

their issue. Until an effective central government administration is established there appears to be but little hope of correcting this serious situation as developed under some of the irresponsible military governors.

An interesting and useful instrument in trade transactions in China is the native bank order. This subject is treated in the section headed "Banking."

GOLD

There are evidences that efforts were made from time to time to embrace gold in China's currency system, but with no tangible results. Probably the nearest approach to the circulation of gold coins came with the effort upon the part of the military governor of Yunnan in October, 1919, to establish a gold coin in his Province. At first a 10-dollar and later a 5-dollar gold coin was placed in circulation, and \$9,000,000 worth of these coins was put out. The gold was purchased when silver was at its high peak. When silver dropped, through a 50 per cent range, these coins became so valuable that they disappeared from circulation.

When the price of silver was exceptionally high in 1919 and 1920, and gold, therefore, cheap from the Chinese point of view, gold was imported in large quantities. On the other hand, when the silver price and exchange dropped—that is, when gold became dear in this silver-using country—then the movement was reversed. In the latter case gold investments realized handsome profits and gold exports increased. Thus, since 1920 gold exports have exceeded imports. During the years 1916 to 1919 inclusive, China imported gold to the value of 86,000,000 taels, and exported 26,000,000 taels, but during the years 1920 to 1923, inclusive, the imports of gold aggregated 100,000,000 taels, and exports 136,000,000 taels. Thus, in a total aggregate trade in gold of 328,000,000 taels, the imports exceeded the exports by only 24,000,000 taels, or, roughly, \$20,000,000 United States gold.

CURRENCY REFORM

The question of currency reform in China is apparently not so difficult as it has often been pictured. With the establishment of a strong central government, it should be possible to operate a central mint for silver coinage and certain designated mints for token coins. With coins in China on a commodity basis, as they are at present, it should not be difficult to retire those now in circulation. Great difficulties will attend the handling of the paper-money issues. In some cases these have fallen to redemption values. Undoubtedly the masses in many sections have come to consider their holdings of provincial notes as valueless, so are not expecting anything by way of redemption plans.

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FOREIGN EXCHANGE

An American typewriter selling for \$100 gold in the United States might have cost the buyer in Shanghai (exclusive of freight, duty, and other charges) during the past 10 years anything from \$85 to \$250 silver, according to the fluctuations in silver exchange during this period. The Chinese dealer makes his purchases in the currency of his country, which is silver. The higher the price of silver in terms of gold, the cheaper will be the American product to the Chinese buyer; thus, high silver favors American exports to China. The American manufacturer who buys Chinese wood oil must pay what the Chinese market dictates in Chinese currency. If it is quoted in 20 taels a picul and exchange is at 65 cents gold to 1 tael, then he pays \$13 in gold for 133½ pounds; but if exchange is at 80 he must pay for the same amount \$16 gold, without the price in China changing 1 cent. Thus the lower the price of silver, the better is the export market of China for the American manufacturer. It is patent, then, that silver exchange is a factor of commanding importance in American trade with China.

In settling exchange transactions it is not necessary that both sides draw; one may draw, the other remit. Shanghai may draw on New York for its exports and remit to New York for the cost of its imports. The importer or exporter effects payments for his goods in telegraphic transfers from China in gold or in bills drawn on China in gold. The merchant in China who sells goods to America on a four months' gold bill would, if he acted entirely upon his own responsibility, chance the exchange value of that gold at the end of the four months. Similarly, if he purchased goods from America on a four months' gold bill he would have to guess the amount of silver it would take at the end of four months to meet that gold payment. If his transaction were on a basis of cash against documents it would be equally perplexing. In other words, he would find his legitimate business transactions involved in speculations in exchange. The services of the exchange bank come to his assistance in quoting daily exchange rates both for telegraphic transfers and for forward rates, thereby transferring the speculative features of the transaction from the merchant to the banker, who is in a better position to cover his transactions in exchange. In fact, the exchange banker is not only able to save the import and export merchant from the necessity

of speculating in exchange in his legitimate import and export transactions, but also to handle his own business in such a way as to make it distinctly profitable to the bank. Thus, it becomes very important that the American having trade with China should understand the principles controlling foreign exchange as they affect the transactions in trade between these two countries.

EXCHANGE QUOTATIONS

Mr. E. E. Kann, manager of the Chinese American Bank of Commerce, Shanghai, has prepared an excellent article on China's foreign trade and transactions in silver and gold bars. For lack of space it is possible to reproduce here only a résumé of Mr. Kann's article:

For international trade and exchange in China, silver is employed. As silver (in quantity) is not mined in China it has to be imported from the world's silver markets, New York and London. Until recently London was the principal market for silver, but since the World War New York has become the chief center of distribution, for China in particular. Practically all the tael bars, the dollars, and the small coin circulating in China have had their origin, directly or indirectly, in imported bar silver.

China is therefore obliged to derive its parity² quotations from the price of silver in an important bar silver market. Such markets have up to the present existed in London and in New York only. It is therefore immaterial whether the parity of the Shanghai tael is based on the price of 1 standard ounce of silver (0.925 fine) in London, or on the price in New York of 1 troy ounce of silver 0.999 fine.

The theoretical conversion of bar silver into Shanghai sycee will result in constants for England of 1.1752 and 108.228 for America. Multiply these constants by the price quoted for bar silver at either London or New York and add charges and interest, in order to obtain the parity quotations for 1 Shanghai tael in shillings and pence, respectively, for the United States dollar.

Having any one of these two rates, all other currencies are brought to the tael parity by introducing into the problem the cross rate. This means that, in order to issue parity rates at Shanghai, one has to receive telegraphically the price of bar silver, the cross rates between the principal trade centers, and the discount rates; the latter only whenever a change occurs.

It needs no emphasizing that the official rates of exchange, as issued every morning at 9.30 by the Hongkong & Shanghai Banking Corporation, are not necessarily corresponding to the parity. In fact, they are usually above or below parity, according to conditions ruling on the home and/or the local money markets. It must also be clearly understood that exchange business in Shanghai is done at widely and frequently fluctuating rates. The official quotations are likely to guide or influence the trend of the market, but usually they fail to check activities created by either a genuine demand or by speculators.

The official exchange bulletin, as issued every morning at Shanghai, which is an important factor to the American or other foreign importer or exporter whose transactions must pass from a gold into a silver currency or vice versa, appears in the following form:

EXCHANGE RATES

Shanghai, Friday, October 17, 1924

1. Bar silver, spot.....	35½—3/6½
2. Bar silver, forward.....	35½
3. Chinese dollars, market rate.....	72.975
4. Chinese dollars, buying rate.....	72.75
5. Chinese dollars, selling rate.....	73.25
6. Native Interest.....	0.05

²There is no real par for silver in terms of gold. What actually exists is what is termed "relative par." Cf. Spalding, W. F., "Eastern Exchange," p. 311.

H. & S. B. C. opening quotations 9.30 a. m.

BANKS' SELLING RATES

7. London: T/T	3/5½
8. London: Demand	3/5½
9. London: 4 m/s	3/5¾
10. India: T/T	229½
11. France: T/T	1,480
12. America: T/T	77¾
13. Hongkong: T/T	70½
14. Japan: T/T	49¼
15. Batavia: T/T	204
16. Straits: T/T	68

BANKS' BUYING RATES

17. London: 4 m/s credits	3/7¼
18. London: 4 m/s documents	3/7½
19. London: 6 m/s credits	3/7¾
20. London: 6 m/s documents	—
21. France: 4 m/s	1,555
22. America: 4 m/s L/C	80¾
23. America: Documents	81¼

EXPLANATION OF QUOTATIONS

For the sake of convenience in locating the individual items, progressive numbers have been placed at the left side of the above schedule, but these do not appear in the original quotations, and are used here merely to facilitate reference:

1. *Bar silver, spot, 35½, parity 3/6½.*—This is the bar silver quotation of the previous date, as cabled from London, for 1 standard ounce of bar silver. The parity of 3s. 6½d. is the theoretical parity, based on the constant of 1.182 (H. O. White); it includes charges, but not interest, and is based on 111.20 Shanghai taels currency being equal to 100 Canton taels weight. In fact, the correct ratio is now 110.90, unless the bars are sold to provincial mints at a premium.

2. *Bar silver forward, 35½.*—This is the London official quotation for two months' delivery of bar silver. It coincides here with the rate for spot delivery, but may at times be higher, at other times lower.

3. *Chinese dollars (market rate), 72.975.*—The quotation is fixed and issued twice daily—in the morning and in the afternoon—by the Chinese Native Banks Guild. It is the proportion of Shanghai taels to 100 silver dollars (local currency). Foreign banks have very little influence over this quotation.

4. *Chinese dollars (buying rate), 72.75.*—This means that the Hongkong & Shanghai Bank is prepared to buy reasonable amounts of dollars and to pay for every \$100 72.75 Shanghai taels.

5. *Chinese dollars (selling rate), 73.25.*—The Hongkong & Shanghai Bank is prepared to sell reasonable amounts at the price of \$100, equal to 73.25 taels. If large sums are involved, the deviation from the official rate is usually 0.10 points only.

6. *Native interest, 0.05.*—This is the official interest rate, issued every day anew by the Native Bankers Guild, uninfluenced by the foreign and modern Chinese commercial banks. It is a good barometer to the state and tendency of the local money market. The quotation refers to so many candareens per 1,000 taels per day. The maximum rate permitted by the guild is 70 candareens. In order to compare with percentage multiply the rate by 365. Thus 20 candareens equals 7.3 per cent per annum.

7. *London T. T., 3/5½.*—This quotation means that the bank is prepared to sell telegraphic transfer on London, payable there on the same day, and give 3s. 5½d. for every Shanghai tael. The rate in this instance is much below silver parity, which fact does not favor import of bar silver. However, it must not be overlooked that the official rate is not necessarily the market rate. In fact, on October 17 business has been done at quotations considerably above the official rate.

8. *London demand, 3/5½.*—The banks sell checks at a slightly higher rate than telegraphic transfer, the difference representing about 30 days' interest at around the official London discount rate.

9. *London 4 months, 3/5¾.*—The same remarks apply here. Five months' interest have to be added to the telegraphic transfer rate. In this case the rate of interest works out at 1½ per cent per annum, which does not make it favorable to remit money to London by a bank draft, payable there four months after sight. As a matter of fact, this mode of remitting is very rarely used unless the difference between the telegraphic transfer rate and for four months' sight is much wider.

10. *India T. T., 229½.*—The quotation for India (229½ rupees=100 Shanghai taels), as well as all other rates following here (except the Hongkong T. T.) are based on the telegraphic transfer rate on London, taken in conjunction with the cross rates, according to the following formula:

? rupees = 1 Shanghai tael.

1 Shanghai tael = 41.50 pence.

18.09375 pence = 1 rupee.

$$X = 2.2930$$

The London-Bombay cross rate was cabled as 1s. 6½d. for 1 rupee.

11. *France T. T., 1,480.*—The quotation is for 100 taels=1,480 francs. In order to ascertain the cross rate on which the Hongkong & Shanghai Bank has based its calculation, use the chain rule.

? francs = 1 pound sterling.

1 pound sterling = 240 pence.

41.5 pence = 1 tael.

1 tael = 14.80 francs.

$$\frac{240 \times 14.80}{41.5} = 85.592$$

The London-Paris cross rate in this instance was 85.6 francs to the pound sterling.

12. *America T. T., 77¼.*—The formula in this instance is as follows:

? gold dollars = 100 taels.

1 tael = 41.5 pence.

240 pence = 4.49½ gold dollars.

$$X = 77.73$$

The Shanghai telegraphic transfer rate of 77¾ United States dollars for 100 taels is based on a New York-London cross rate of 4.49¼.

13. *Hongkong T. T., 70½.*—This quotation is (contrary to most others on the bulletin) in taels, and not in foreign money. It means that the bank will sell 100 Hongkong dollars telegraphic transfer for 70½ Shanghai taels. The quotation is subject to demand and inquiry and may fluctuate up to the shipping point, always provided that there is no embargo on the export of silver dollars from Hongkong. As the Hongkong & Shanghai Bank is the principal note-issuing bank in Hongkong, it is in a position to control the quotation between Hongkong and Shanghai.

14. *Japan T. T., 49¾.*—As in the previous instance, the Japan rate is quoted in China in taels per 100 yen. It is obtained by applying the cross rate between London and Japan. In normal times the mint parity is 24.576 pence=1 yen. In 1919 the cross rate had surpassed 2s. 10d., and in 1924 it had dropped to 1s. 8¾d. per yen.

? taels = 100 yen.

1 yen = 20.4375 pence.

41.5 pence = 1 tael.

$$100 \text{ yen} = 49\frac{1}{4} \text{ taels}$$

15. *Batavia T. T., 204.*—There is very little direct trade between the Netherlands and China, but a good deal of direct business is done between the Dutch

East Indies and China, notably in sugar. Usually the rate for florins payable in the Netherlands is somewhat lower than the quotation for florins (guilders) on the Dutch East Indies. Through the chain rule in the usual manner we can ascertain on what cross rate the above quotation of 204 florins for 100 taels is based.

2 florins	=1 pound sterling.
1 pound sterling	=240 pence.
41.5 pence	=1 tael.
1 tael	=204 florins.
	1 pound sterling=11.80 florins

16. *Straits T. T.* 68.—This quotation is in taels for 100 Singapore dollars. It is obtained by applying the cross rate, which was then 2s. 4¼d. for 1 Straits dollar.

2 taels	=100 Straits dollars.
1 Straits dollar	=28.25 pence.
41.5 pence	=1 tael.
	100 Straits dollars=68.07 taels

The foregoing quotations have been banks' selling rates, and the following are buying quotations. These are obtained by adding to the selling rates interest for the period during which the drafts are en route, plus interest for the time the draft has still to run. The official buying rates are far too high to allow business to be transacted. Therefore they may be considered as nominal.

In making calculations for buying rates the bank has to add to the quotation at which it can actually sell: (1) Brokerage, (2) interest for the time the draft is en route, (3) interest for the period the draft has to run (this means the rate at which it can be discounted after acceptance), and (4) a margin of profit. In some countries there are also revenue stamps and collection charges to be considered. Let us consider the remaining quotations in this light.

17. *London, 4 m/s credits, 3/7¼.*—The quotation refers to drafts negotiated under confirmed banker's credit and therefore easily discountable. Say, on October 17, 1914, a Shanghai bank had to sell T. T. on London at 3s. 6d. per tael:

	Pence
Selling rate.....	42.0000
Brokerage, ¼ per cent.....	.0525
30 days' interest at 6 per cent (en route).....	.2100
120 days' discount at 4 per cent.....	.5600
Profit.....	.2500
Bill stamps, postage, and petties.....	.0575
Total.....	43.1300

The Shanghai bank will therefore be in a position to buy at 3s. 7¼d. per tael.

18. *London, 4 m/s documents, 3/7½.*—The rate is ¼d. above the 4-month credit quotation, partly because the draft is either not discountable or only at a higher rate of discount: therefore the interest charge is above the cost discussed in the previous example. Besides, there is an added risk in negotiating documentary drafts drawn on firms or individuals.

19. *London, 6 m/s credits, 3/7½.*—The extended usance and the higher rate of discount for 6-month drafts are the principal factors for an increased quotation.

20. *London, 6 m/s documents.*—No quotation is given here, as it is not customary to draw six months, D/P. However, such paper is sometimes in the market, and as banks are not keen to compete for this class of bills the drawer will have to accept a rather high rate.

21. *France 4 m/s, 1,555.*—It is not customary to negotiate drafts on France under L/C. Practically all export drafts from China are drawn on firms (chiefly against shipment of raw silk), either D/P or D/A. Discounts are usually 1 per cent below the official Banque de France rate, but no standing rule can be established in this connection.

Say, on October 17, 1924, a bank could sell telegraphic transfer on Paris at 1,500 francs:

	Francs
Selling rate	1,500.000
Brokerage, one-eighth of 1 per cent	1.875
Profit, one-fourth of 1 per cent	3.750
Bill stamps, commissions	3.775
150 days' interest, at 6 per cent	37.500
Total	1,546.900

The bank will probably be pleased to buy 4-month documentary drafts at the rate of 1,550 francs for 100 taels.

22. *America, $\frac{1}{4}$ m/s L/C, 80 $\frac{3}{4}$.*—When this rate was issued call money at New York was 2 per cent and discounts averaged 3 per cent. Therefore, if the bank could have sold telegraphic transfer on America at, say, 78 $\frac{1}{2}$, it would have bought 4-month credit bills at 80.

T. T. selling rate	\$78.500
Brokerage, one-eighth of 1 per cent .....	.098
Profit, one-fourth of 1 per cent .....	.196
1 month's interest, at 6 per cent .....	.300
4 months' discount, at 3 per cent .....	.780
Postage and petties .....	.036

Total 80.000

23. *America, $\frac{1}{4}$ m/s documents, 81 $\frac{1}{4}$.*—The calculation is similar to the preceding example, except for a higher rate of interest, as the draft is scarcely discountable. Besides, the risk is greater.

BAR SILVER

IMPORT OF BAR SILVER FROM AMERICA

The United States is producing from 60,000,000 to 70,000,000 ounces of silver each year, which is about one-third of the world's output. The consumption within the country for industrial purposes is estimated at 20,000,000 to 30,000,000 ounces annually, and the remainder is exported abroad. In addition to the surplus production of the United States, New York and San Francisco have become trading centers for the silver produced in Mexico and Canada. New York is fast gaining on London in importance as the world's market for bar silver, all the factors being in favor of the former place.

China and, recently, India have bought the bulk of their requirements in the United States instead of in London, as formerly. The arrival of bar silver in China during 1923 amounted to 71,318 bars of about 1,000 ounces each, out of which 50,204 bars were imported from America.

During the first eight months of 1924 the total number of silver bars landed at Shanghai amounted to 20,187, and of these 22,251 bars came from the United States.

Conditions prevailing on the American silver market are somewhat peculiar; they differ from those in vogue at London in many respects, but notably in the following two points:

1. The New York official silver quotation (per ounce fine) is hardly ever the price at which business is done in America, while the London official quotations (per standard ounce) represent the actual market price.

2. The express and the steamer freight rates in and from America are not uniform, but are subject to reduction in the same proportion as the quantity increases in value. London quotes uniform freight rates for any quantity instead of graduated rates.

CONVERSION OF AMERICAN BAR SILVER INTO SHANGHAI TAEIS

If the bar silver imported from America is to be melted down in Shanghai, in order to be converted into sycee taels the local smelting shops (called loofangs) will return to the bank 111 Shanghai taels (currency) for every 100 Canton taels weight of American bar silver 0.999 fine. This proportion was

fixed in 1920. Before that year the outturn would have been 111.30 Shanghai taels. As a reason for the difference the smelters indicated the higher cost of labor and coal.

It has happened in the years 1922 to 1924 that American bar silver was sold locally at premiums varying from one-fourth of 1 per cent to 1 per cent. In such cases the bar silver was not wanted for conversion into sycee, but for coinage. Some of the provincial mints thought that they could afford to pay a premium, as even under these circumstances they made sufficiently large profits. American bar silver was frequently sold at Shanghai during the period indicated at 111.50 and even as high as 112 Shanghai taels for each 100 Canton taels weight.

Formula for the constant.—The weight of 1 Canton tael is 579.84 grains, or 1.208 ounces troy; the weight of 100 Shanghai taels is 108.6212 ounces troy.

"Parity" between American bar silver and the Shanghai rate for telegraphic transfer on America is illustrated by the formula below:

? U. S. dollars.	=100 Shanghai taels currency.
111 Shanghai taels currency	=100 Canton taels weight.
1 Canton tael weight	=579.84 grains.
480 grains	=1 ounce.
1 ounce	=New York silver price.

$$\frac{100 \times 100 \times 579.84}{111 \times 1 \times 480} = 108.828.$$

The figure 108.828 is a constant. It does not include charges and interest, which have to be added according to conditions prevailing at the time of making calculations. These charges vary not only in course of time, but their total is influenced by the rate of interest prevailing on the money market. The total is furthermore subject to a graduated scale for freight, according to the quantity shipped.

In the autumn of 1924 the expenses for shipping \$100,000 (U. S.) worth of bar silver from San Francisco to Shanghai would have been as follows:

Freight, five-eighths of 1 per cent.....	\$625.00
Insurance, one-eighth of 1 per cent.....	125.00
Bank's commission, one-sixteenth of 1 per cent.....	62.50
Interest for 25 days at 5 per cent.....	340.00
Landing expenses, coolie hire at Shanghai, cables, and incidentals.....	60.00
Cartage at San Francisco, 25 cents per bar.....	37.50

Total charges (equivalent to $1\frac{1}{4}$ per cent)..... 1,250.00

To the constant 108.828 add $1\frac{1}{4}$ per cent charges, or 1.360, making the total 110.188.

In order to obtain the "parity" of telegraphic transfer at Shanghai, multiply the constant (plus charges) by the price at which silver is actually obtainable at San Francisco. If, for example, the actual price per ounce 0.999 fine is 70 cents, the "parity" for telegraphic transfer on America will be $110.188 \times 70 = 77.1316$. Provided that telegraphic transfer at Shanghai can be bought at, say, $77\frac{1}{2}$ United States dollars for 100 taels, it will be remunerative to buy bar silver at San Francisco at a price of 70 cents an ounce and have it shipped to Shanghai.

The brokerage on bar silver amounts to one-sixteenth of 1 cent per ounce and is payable by the seller.

? U. S. dollars	=1 Shanghai tael currency.
111 Shanghai taels	=100 Canton taels weight.
82.7815 Canton taels	=100 ounces fine.
1 ounce fine	=U. S. dollar price.

$$\frac{100 \times 100}{111 \times 82.7815} = 1.0882877$$

To the constant 1.08828 add the amount of charges and interest.

If turned into Shanghai sycee, 100,000 ounces of American silver (0.999 fine) will produce 91,887.27 Shanghai taels.

LONDON AND AMERICAN BAR SILVER COMPARED

Until the outbreak of the World War London was the only market of importance for bar silver. During a certain period of the war exports of silver from England had to be discontinued. As New York was well able to take care of the silver market, it was natural that matters developed rapidly, and since that time New York has not only held its own but, conjointly with San Francisco, has taken the lead. This is natural if one considers that every factor is in favor of the United States.

Practically all of America's silver production is now being sold in the United States. India and China since the beginning of 1924 are taking the bulk of their requirements from America direct instead of from England, as was done formerly. About seven-twelfths of America's silver production comes to New York and five-twelfths to San Francisco.

In spite of these facts the London silver market undoubtedly retains a good deal of its old glory and importance. It has served as a basis for quotations in silver-using countries for many decades, and it continues to exercise this function, notwithstanding the limitation of supplies and the depreciation of the pound sterling.

ENGLISH BAR SILVER MARKET

Silver bars have the shape of bricks and weigh usually from $30\frac{1}{2}$ to 37 kilos, i. e., 980 to 1,190 ounces troy. This description is applicable to English as well as American bar silver.

English bars destined for export abroad are 0.998 fine, but bars of a fineness of 0.996 and 0.997 are admissible and do occur, though in small proportions only.

The British standard for silver is 0.925, which means that in 240 parts of alloy 222 parts of pure silver are contained:

$$\frac{222}{24} = \frac{37}{40} \text{ or } 0.925$$

As bar silver exported from London to China and India is usually 0.998 fine, it is $17\frac{1}{2}$ better than the English standard:

$$\frac{222 + 17\frac{1}{2}}{240} = \frac{239\frac{1}{2}}{240} = 0.998$$

Bar silver is a commodity in London, and its price is subject to the relation of demand to supply. All official transactions must pass through one of the four old established firms of bullion brokers, who meet daily at 2 p. m. in order to fix silver quotations in harmony with orders on hand.

There are two official silver quotations issued daily in London, one for spot delivery (which means within seven days) and one for two months from date of making the contract; but unofficially it can be arranged that delivery be made at any particular day within two months, at a price to be specially arranged.

As there is a difference of eight hours in time between Shanghai and London (Shanghai being earlier), China can operate only on London's quotations of the previous day.

Every bar of silver is clearly marked, so as to be easily identified. It shows the weight (within $\frac{1}{4}$ ounce), the fineness, and initials with numbers. It is accompanied by a chip (about $\frac{1}{4}$ ounce in weight) and a testimony of assay.

ENGLISH BAR SILVER AND THE CHINA MARKET

English bar silver is bought by China either for export to China or for forward delivery as cover for a purchase of sterling drafts or telegraphic transfer with the idea to reverse the transaction as soon as the parity will permit.

The import of bar silver into China serves purely currency purposes, which means that the silver is melted after arrival and then converted into sycee taels or dollars or subsidiary coins.

Contrary to established usage in America, the brokerage in England on bar silver, amounting to one-eighth of 1 per cent, is payable by the buyer. Other charges fluctuate. So, for example, the freight from London to China was reduced in September, 1924, from three-fourths of 1 per cent to five-eighths of 1 per cent, in order to be better able to compete with New York.

Interest varies greatly and depends not only on the state of the money market, but also on the ability of the importer to finance the shipment (until arrival at Shanghai) by means of sterling or by means of taels. In the former case the rate of interest will be much lower, as money at Shanghai commands much higher rates of interest.

Bar silver is bought and sold in London in gross ounces, but quotations are in standard ounces (0.925 fine). One can have orders executed in standard ounces just as easily, but this would have to be distinctly stated when placing the order. "Buy 100,000 ounces spot delivery, at best" means 100,000 ounces troy. Orders may also be placed for a specified amount in sterling: "Buy at a limit of ---- pence, £25,000 bar silver, forward delivery."

CONVERSION OF ENGLISH BAR SILVER INTO SHANGHAI TAELS

There are two questions immediately connected with the conversion of bar silver into sycee taels, the first of which is how many Shanghai taels currency are 100,000 troy ounces of bar silver 0.998 fine. This may be demonstrated by the following formula:

$$\begin{aligned} ? \text{ Shanghai taels} &= 100,000 \text{ ounces English silver.} \\ 1.208 \text{ ounces} &= 1 \text{ Canton tael weight.} \\ 100 \text{ Canton taels' weight of bar silver} &= 110.90 \text{ Shanghai taels currency.} \\ \frac{100,000 \times 110.90}{1.208 \times 100} &= 91,804.64 \text{ Shanghai taels} \end{aligned}$$

The second problem, which is of more importance, resolves itself into establishing a basis for the parity of the pound sterling and the Shanghai tael.

The constant derived from the following formulas, multiplied by the London price per ounce standard of bar silver, will give the theoretical par between London and Shanghai. The addition of charges and interest will produce the actual parity between the Shanghai tael and the pound. Charges fluctuate and may be considered (until further notice) to consist of the following items:

	Per cent
Freight London to Shanghai.....	0.625
Insurance.....	.100
Dock charges, marking, and landing.....	.250
London brokerage.....	.125
	<hr/>
	1.10

Interest for 45 days is to be added, according to the rate at which one is willing to invest funds or at which one can borrow money.

The origin of all the links in the chain constituting the following formulas are plain, except perhaps the presence of the Canton taels weight. The reason the Canton tael is introduced into our calculations is that when foreign banks first entered the field at Shanghai they brought along with them Cantonese compradors, who were accustomed to the Canton taels weight. To this day the original standard has been maintained.

The following formula may be used in making the desired conversions:

$$\begin{aligned} ? \text{ pence} &= 1 \text{ Shanghai tael currency.} \\ 110.90 \text{ Shanghai taels} &= 100 \text{ Canton taels weight.} \\ 1 \text{ Canton tael weight} &= 579.84 \text{ grains.} \\ 480 \text{ grains} &= 1 \text{ ounce 0.998 fine.} \\ 222 \text{ ounces fine} &= 240 \text{ ounces standard.} \\ 1 \text{ ounce standard} &= \text{London price in pence.} \\ \frac{579.84 \times 99.8 \times 240}{110.90 \times 480 \times 222} &= 1.175234 \end{aligned}$$

The constant is 1.175. Say the price of bar silver in London per ounce standard is 35%^d. for spot delivery:

$$\begin{aligned} \text{Multiply price per ounce by the constant, 1.175. } (35.625 \times 1.175) &= 41.859375 \\ \text{Add charges, 1 per cent (variable)} &= .460453 \\ \text{Add interest for 45 days at 4 per cent (variable)} &= .231472 \end{aligned}$$

$$\text{Parity for 1 Shanghai tael (or 3s. 6}\frac{1}{2}\text{\%d.)} = 42.5513$$

If, for example, telegraphic transfer on London is obtainable at Shanghai at 3s. 7d. for ready delivery, it will be remunerative to buy telegraphic transfer in Shanghai, remit to London, and purchase bar silver there for ready shipment. If, on the other hand, telegraphic transfer on London can be sold at Shanghai below the parity just demonstrated (3s. 6 $\frac{1}{2}$ d.), say, at 3s. 6d. for forward delivery, it will prove remunerative to sell sterling at Shanghai and cover by selling simultaneously silver in London for forward delivery.

This means that if the rate for telegraphic transfer is above parity of bar silver, it induces purchase of silver in London (import into China); if below parity, it favors sale of silver in London (export of silver from Shanghai).

GOLD BARS

DESCRIPTION

Gold in the shape of bars plays a most important rôle in financial transactions in China. Gold bars are derived from gold articles, and to a larger extent from coins, melted down and refined to the degree required. In shape gold bars are small oblong bricks with rounded-off corners. They weigh as nearly as possible 10 Shanghai taels (10 Shanghai taels weight equal 11.3593 ounces).

In North China still may be found gold bars weighing from 5 to 10 taels, having the shape of sycee and being as nearly as possible 1,000 fine. However, bars of this shape, which are used to hoard savings, are seldom encountered.

Gold bars handled at Shanghai are similar in shape and weight to those produced at Tientsin and Peking, but not in fineness, which is as follows for these three types:

Shanghai bars.....	0.978
Tientsin bars.....	.980
Peking bars.....	.985

Each bar is embossed with the firm name of the smelter, also the year in which it was manufactured and the Chinese characters meaning "surface gold," that is, gold containing alloy.

Gold bars are for the most part gold coins melted down after being imported from countries where there is a free circulation of gold, which means that bank notes can be cashed against gold coin at par and that there is no export prohibition in force in China relative to the yellow metal. Banks in China very rarely import gold coins for their own account. Invariably the imports are made for Chinese clients, who agree to a certain price in silver taels or in telegraphic transfer of the same gold currency, plus charges and commission. The Chinese buyer, upon receipt, will invariably melt the coin into gold bars for sale in the local market.

The weight of gold bars is as follows: The Shanghai bar equals 10 Chauping taels (366.71 grams); Tientsin bars are 1.35 per cent lighter in weight, which means that 1 Shanghai gold bar equals 1.0135 Tientsin gold bars in weight; 1 Shanghai gold bar weighs 1.0183 Peking bars.

TRADING IN GOLD BARS

Gold bars have become of enormous importance to the financial markets in China, notably for Shanghai. They are sold for actual delivery by Chinese holders to banks, who will buy, whenever the parity permits it, for export abroad. The bulk of transactions in gold bars is made for delivery on settlement day (which at Shanghai is now the 15th of each month). Contracts for delivery exceeding two months are not permissible. There is a gold-bar exchange, to which members send their representatives.

Already in the beginning of the present century there existed an association of gold dealers in Shanghai. The members dealt in gold with persons having direct use for gold for adornment or for export abroad. But there was no gold exchange. Such an institution had begun already to take root before the advent of the European war and developed fully during that memorable period. To-day it commands the attention of the world by means of its huge transactions and through its powerful influence on the price of silver.

GOLD BARS FROM PEKING AND TIENTSIN

As indicated above, Peking gold bars are of a fineness of 0.985, but they are below the weight of Shanghai bars. One Shanghai bar equals 1.0183 Peking bars.

In order to buy large amounts of gold, Peking will probably have either to draw on Shanghai or demand shipment of sycee. In the former case, the actual drawing rate (telegraphic transfer selling for Shanghai taels) will have to be considered; in the latter instance, the outturn of sycee actually shipped. This would mean that 107 Shanghai taels equals 100 Peking taels. The formula is as follows:

$$\frac{\text{Shanghai price for gold bars} \times 0.985}{1.0183 \times 978 \times \text{drawing rate on Shanghai}}$$

Gold bars in Tientsin are 0.980 fine and weigh 1.0132 for every Shanghai tael weight. If Tientsin buys large quantities of gold bars for account of Shanghai such purchases will be paid for by drawing telegraphic transfer on Shanghai (market rate) or by ordering shipment of sycee from Shanghai; the latter will turn out at a cross rate of 1.064 Shanghai taels to 1,000 Tientsin taels. The following formula demonstrates:

$$\frac{\text{Shanghai gold-bar price} \times 0.980}{1.0132 \times 0.978 \times \text{drawing rate}}$$

It has to be borne in mind that charges and interest for shipments from Peking and Tientsin to foreign countries will be higher on almost every item as compared with Shanghai. The gold has to be transhipped at Shanghai and is therefore subject to extra freight and additional insurance and interest.

EXPORT OF GOLD BARS

When exported, gold bars are wrapped in soft paper and wadding and are either packed into bamboo tubes, usually 10 bars into each tube, or placed in small but strong wooden boxes. The parcels are then wrapped with Hessian cloth, which is sewn up and secured by thin steel wire. Finally, they are provided with a number of seals. The packing is inexpensive, and the cost is from 20 to 50 cents per parcel weighing between 4 and 5 kilos.

The export of gold bars is made possible if the parity permits it. The parity is based on yen. Multiply the constant 4.7682 by the market rate for telegraphic transfer on Japan and add charges and interest to the result. If gold bars for spot delivery (actual bars) are obtainable below the parity, it will be possible to export gold and obtain a profit. The theoretical as well as the practical aspect of the question will be demonstrated presently.

In principle, gold bars may be exported to any country willing to buy them at the seller's price. There are no restrictions placed in the way by the Chinese Government, and there is no duty imposed on gold shipments inward or outward by the customs.

Export to America.—Since 1920 very large quantities of gold bars have been shipped from Shanghai to the United States of America. There was a total interruption of export in 1922, when the parity did not allow the shipment of gold bars from China to the United States, but shipments were continued again in 1923 and 1924.

Here a warning may be inserted as to the handling of gold bars from Shanghai. The fineness of gold shipped from China is guaranteed by the seller. If it exceeds 0.978, a refund is made by the buyer at Shanghai, but if it is below this standard a refund is claimed from the seller. A bank at Shanghai often makes a large shipment of gold bars to the United States; such shipments consist frequently of bars contracted for with sundry sellers.

It is true that the bars are numbered; but if they are melted together and then found at the assay to be deviating from the fineness of 0.978, it will be impossible to ascertain whose bars had been deficient. In such an event it will be impossible to allocate the claim to the party concerned. Therefore it is advisable to have a clearly stipulated lot of gold bars melted separately.

Claims at Shanghai are settled according to the actual fineness, on the strength of the mint's assay certificate. For instance, a bank at Shanghai buys 70 gold bars with a guaranteed fineness of 0.978. This would mean 68,460 units of fine contents. After assay at the United States mint it was ascer-

tained that some bars were only 0.960, others 0.945 fine. The total difference was certified to amount to 1,220 units of fine contents. The bars were originally purchased at Shanghai at 282.50 taels per bar, so that the seller will have to refund to the bank here 344.65 taels.

After these preliminary remarks it may be appropriate to turn to the consideration of actual shipments of gold bars to America. These are, owing to proximity of that port, consigned to San Francisco, but may just as well be directed to any other of the four remaining mints (Carson, Denver, Philadelphia, or New Orleans), or they may be addressed to one of the Government assay offices at New York, Boise, Charlotte, Deadwood, Helena, Seattle, or St. Louis.

Charges and interest fluctuate. The following is illustrative, based on rates prevailing at time of computation:

	Per cent
Packing and postage	0.030
Brokerage at Shanghai .....	.050
Insurance .....	.015
Mint charges .....	.040
Correspondent's commission and other incidentals in America .....	.250
Total charges .....	.385
Interest, 30 days at 5 per cent .....	.415
Total .....	.800

The equivalent of \$100,000 is 4,196.9339 Shanghai taels (weight) of gold bars (0.978 fine). Consequently the value of 1 gold bar of 10 taels weight is \$238.2680.

Constant (United States currency)	\$238.268
Deduct charges and interest (variable)	0.800

Remainder	237.468
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In order to find the mint parity between Shanghai gold bars and United States dollars, divide the constant by the bank's buying rate for telegraphic transfer on America and deduct charges and interest. If gold bars are obtainable below the figure obtained by such a computation, it will be possible to ship gold to the United States.

BANKING

For a clear understanding of banking in China it is important to mark the distinctions between foreign banks and Chinese banks. Of the foreign banks in China, there are 4 American, 1 Belgian, 4 British, 3 French, 2 Dutch, 1 German, 1 Italian, 35 Japanese, 3 Russian, and 1 Scandinavian. Notwithstanding the restrictions in business imposed upon them by operation of the treaty laws, the foreign banks have become powerful institutions in the principal trading centers of the country.

FOREIGN BANKS

Foreign banks are entitled to establish themselves only in treaty ports, and they have no right of operation in nontreaty port cities. They are, for the most part, subject to the laws of their respective countries, under the jurisdiction of the duly authorized representatives of those countries in China; hence they are ordinarily not subject in any respect to the laws or control of China. Since, except in special cases, foreigners other than missionaries may not hold land in China outside of designated treaty ports, the foreign banks may not ordinarily participate in financial projects which would involve securities falling outside the limits of the treaty-port areas. There is nothing to prevent foreign banks from financing projects within treaty-port limits, but the main business of foreign banks in China

is that of financing foreign trade. The life of their business is the handling of bills of exchange.

Working through the fictitious tael units, of which there are many, and through other units of currency differing in one part of the country from those in another, the foreign bank in China probably has a more lucrative field in its exchange transactions than obtains anywhere else in the world.

The manager of one of the foreign banks, when asked why his bank had not extended greater facilities to local merchants in financing their business operations, answered that his bank's turnover in exchange transactions could net the bank annual profits of 15 to 20 per cent, which was more acceptable to the stockholders than "commercial banking," in the American sense of the phrase.

The largest and most influential of the foreign banks in China is a British institution which has celebrated its seventieth anniversary. Much of its strength lies in the fact that it is an indigenous institution, with its head office in Hongkong and not in London. With its board of directors on the ground and with their knowledge of the details of the bank's business in China, they can act with quick decision and intelligence on all matters affecting the bank's interests. A second advantage which this bank possesses is the wide distribution of its shares among the substantial British and Chinese business public; hence it has in the mercantile life of China a considerable clientele which is financially interested in its success and which naturally contributes to its business. Thirdly, through its recognized position of strength in British financial circles it has been accepted by British financial interests as their natural representative in transactions involving loans and other finance accommodations, with the result that this bank is the depository for certain Chinese railway funds pledged for British loans and, through Great Britain's predominant position in the customs and salt administrations, for a portion of the customs and salt revenues. The aggregate of all these probably amounts to an average balance of \$10,000,000 silver in ready resources, some of which the bank holds free of interest charges. Through the strength of its position thus developed over a long period of years this bank is virtually dictator of the silver rates in the China exchange market as they affect foreign trade.

Many of the foreign banks have their notes in circulation in the principal treaty ports of the country. To the American it is a curious situation which permits a bank in one locality to discount its own notes issued for another locality; but the currency-exchange situation in China makes this possible, for the reason that money is always a commodity while serving as a medium of exchange. Hence the banks' buying and selling rates of the various moneys in circulation differ as to net profits to the banks on all exchange transactions.

CHINESE BANKS

Chinese banking is undergoing a transition. It was the failure of Chinese banks to meet the necessities of the foreign traders which encouraged foreign banks³ to expand into the powerful institutions

³ A detailed description of foreign, semiforeign, and native banks in China may be found in *Currency, Banking, and Finance in China*, by Frederic E. Lee, published by the Bureau of Foreign and Domestic Commerce, Washington, D. C., as Trade Promotion Series No. 27.

they have become. Gradually, however, the Chinese are developing modern banks and there are now in Shanghai, Tientsin, Hankow, Canton, and other trading centers Chinese banks possessing the facilities and discharging functions patterned after the foreign institutions. They still lack an effective Government control, for China has still to develop a system of bank inspection and the effective administration of banking laws for the control of note issues, reserves, loans, and similar functions of banks.

Until about 1890 the Chinese Government showed little evidence of interesting itself directly in business enterprise, and prior to 1900 the banking of the country, other than that of a purely local community character, was for the most part in the hands of Shansi bankers. The Shansi bankers commanded more than 50 per cent of the larger banking business of the country. They had branches throughout the country, and their monopoly of the Government business and the resources which this emolument placed at their command gave them great strength. But they disappeared entirely as a corporate body in 1912. Thus native banks, even in Shansi, to-day are not necessarily Shansi bankers in the original sense of the word. An interesting sidelight on business methods in China, as practiced by the Shansi bankers and involving the mutual responsibility of individual and family, is shown in the extract below from a report made some years ago by Mr. T. W. Wright, of the Chinese Maritime Customs:

A peculiar feature in the constitution of these banks is the extraordinary manner in which the employees are treated. The bankers themselves, being Shansi men, employ only natives of that Province, and, when possible, select men out of their own villages. When a man is appointed to a post at one of the branch offices, his family is taken charge of by the bank and held as security for fidelity and good behavior. At his post the employee may send no letter to his family, except an open one through his master; he receives no pay or salary of any kind while away; officials are entertained, clothing is purchased as required, and sundry expenses are incurred, and every item is met with the bank's money, the strictest account being kept of all expenditures on behalf of the individual. A man holds his appointment for three years, and then returns to his employer's house, taking with him the account of the money expended during his term; he is duly searched, and the clothing he has purchased undergoes examination. Should it happen, after examination, that the accounts, etc., are satisfactory and the affairs of the bank have been prospering during the man's tenure of office, he is handsomely rewarded, and is allowed to join his family, who are immediately released. If, on the other hand, business has not prospered under the man's management and he has presented an unsatisfactory account, clothing and everything are retained, and the family are held in bondage until a suitable fine is paid, or the man himself may be imprisoned.

Following the settlement of the Boxer troubles, the Chinese customs funds became a pledge for foreign loans, and gradually the foreign banks became the depositories of the funds necessary to meet these pledges. Also the loans pledged on the salt revenues and the loans for railway construction made the banks of the foreign nationals negotiating these loans the depositories of funds for the meeting of interest and amortization charges. Thus the Shansi bankers lost their monopoly of the Government business. Moreover, the provincial banks—which have sprung up since 1900—absorbed much of the business originally given to the Shansi banks.

In 1908 the central Government effected the organization of a State bank (Bank of China) and a special bank (the Bank of Communications) for the handling of funds for the Ministry of Communications. But during 1916 the disorganization of the central Government disrupted the management of these banks as State institutions. Private business interests affiliated with them gradually succeeded in wresting them from Government control and saved them from being completely wrecked. The Government's interest in both the Bank of China and the Bank of Communications was reduced to a minority interest, and these banks are now more private than public in character, although they continue to enjoy certain privileges carried with their original charters.

The greatest source of confusion in Chinese banking circles is the provincial bank, which has often been used as the instrument of some provincial military governor who utilized it for the issuance of paper currency far in excess of the bank's specie reserves. Probably no other agency has done more to disrupt China's currency than provincial banks under the domination of irresponsible military forces. The demoralization, however, has not proceeded as far as might be surmised by those unfamiliar with the power of the Chinese guild and other private agencies to combat them. Moreover, the average tenure of office of the ordinary military overlord in any one section of the country has been comparatively short. These factors have mitigated in some degree the damaging effects of the use by unscrupulous military governors of the provincial banks.

In all, there are between 100 and 150 individual modern Chinese banks, with an aggregate paid-up capital of \$150,000,000 to \$200,000,000 silver. The Bank of China and the Bank of Communications, which figure among the larger of these modern banks, have, respectively, 113 and 60 branches throughout the country. The Bank of China has in circulation in China its notes to an aggregate value of \$90,000,000 silver, secured by \$50,000,000 silver specie reserves. Thus it may be said that, with the exception of the provincial or semiofficial banks, the modern-style Chinese banks appear to be developing along sound and progressive lines.

The bulk of the actual banking business in China, however, is still in the hands of the old-type native banks.

Banks of the old type in China grew up without Government regulations, registrations, inspections, or assistance. It has been the policy of the Chinese Government to interfere as little as possible in the affairs of its subjects. The old-type native bank is an individual or partnership concern, with all the members of the family and all the partners jointly and severally responsible to the limit of their liabilities. Except for its relations with the bankers' guild, it is independent of all other banks. Its reputation and standing in the community depends, first, upon its proprietor and then upon its manager. These two are all supreme.

The prime qualification for entering a banking business in China is evidence of a good financial standing among one's neighbors, combined with sufficient capital to insure reasonable success. A capital of \$50,000 silver (\$25,000 gold) would be considered very substan-

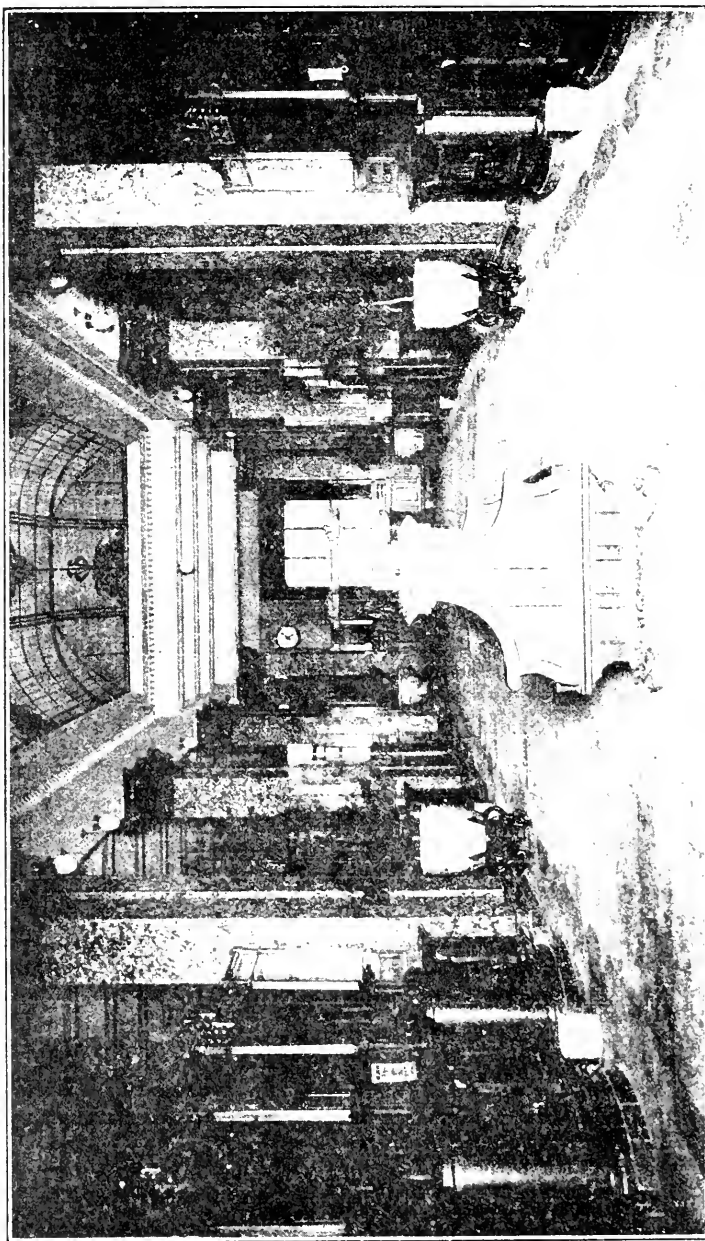


FIG. 6.—Interior of one of the leading Chinese banking institutions in Shanghai

tial—in fact, is the usual limit for the old-style native bank. The statement has been made that one of the peculiar features of a Chinese bank is that it does not work for the account of outside funds, but that its asset business is carried out exclusively for the account of the proper capital of the banks and of loans made with larger credit institutions. The native bank does not finance industrial concerns, nor does it grant long-term loans.

The old type of native bank did not seek palatial quarters, for officialdom might be attracted by what could be interpreted as evidence of prosperity, and tax exactions in some form or other would be sure to follow. Some protection from this menace could be expected from the bankers' guild, but a banker would have himself to blame if he stepped out and unnecessarily gave evidence of wealth.

If a banker is known to meet his obligations, he may extend the issuance of credit to his dealers, and his orders will be accepted without question by other native bankers or dealers. The law did not require the banker to keep on deposit a certain security against notes issued. The native bank receives deposits, for which it pays interest rates up to 10 per cent. These are on fixed deposits with a minimum period of six months. The Chinese public is not generally educated, however, to depositing its money in banks, nor did these banks carry current checking accounts. There were no legal restrictions on loans made by banks or on interest charges which, from a western point of view, are often usurious. One and a half per cent a month is considered a reasonable rate. Some of the native banks maintain warehouses for the storage of grain and other commodities offered as security for loans, but these are unusual. Most loans are made on personal security backed by personal guarantors. The family system, whereby a person's responsibility extends to the members of his family (family in the generic sense of clan), made this a more practical custom than it would otherwise seem.

Exchange transactions offer to the native banks probably the steadiest source of income. Some of the merchant organizations transact their own exchange business through a special class of native banks. These concerns have a very considerable turnover in the interchange of commodities between different places, hence, with very little shipment of coin or bullion, are able to pay bills drawn in one place against another place.

The bankers' guild is the one important bond which holds these native banks together and makes possible their continued operations along the lines which have characterized their activities over so many centuries. Each city in China has its bankers' guild; in fact, in many cities it is the most important commercial organization. The guild fixes the rates of interest, exchange rates, regulations regarding procedure, and a multitude of details concerning the conduct of business. Membership is not obligatory, but it is of such advantage that no one can afford to remain outside the guild. One of its important functions is the adjudication of disputes. The guild's arbitration committee handles matters which elsewhere would lie within the functions of a court. The guild also provides certain clearing-house facilities for members. The Shanghai native bankers' guild provides that each money dealer may send his books to the exchange

twice a day to square accounts. In fact, the clearing-house arrangement in Shanghai, which is under the auspices of the bankers' guild, is much less cumbersome than that of the foreign exchange banks, which are obliged to make their settlements each day in specie, necessitating huge quantities of silver to be carted around the streets of Shanghai every evening in effecting settlements, which, it would seem, might be handled in a clearing house.

An interesting comparison between the old-style native bank and the modern Chinese bank of the capital of Shantung Province, a city of about 300,000 population, is given in the November, 1924, monthly report of the Chinese Bureau of Economic Information:

Notwithstanding the introduction of modern banking institutions into Tsinan, native banks continue to hold sway on the local market. Over 185 native banks are now flourishing. Forty per cent of these have been in existence since pre-Republican days. These older institutions, as a rule, are well managed and financially sound. Their proprietors are mostly wealthy merchants of Changkiu, a hsien (district) in Shantung Province, from which the majority of the bankers in Tsinan come. Those established in pre-Republican days are very conservative. They retain many old-fashioned practices. Their capital is counted by the string of cash instead of the dollar or tael. A string of cash in Tsinan is equivalent to about one-fifth of a dollar. The amount of capital possessed by each of these institutions varies from 20,000 to 100,000 strings of cash. These banks are generally run by men who thoroughly understand their business, and are always on a sound basis, notwithstanding their moderate capitalization. Those which have sprung up since the establishment of the Republic have many new features. Their capital is counted by the dollar. Fifty thousand dollars is a very moderate sum for the capital of such a bank. Invariably they have connections with certain military leaders or high Government officials, who are of assistance in establishing their position, and, of course, benefit from their prosperity. These institutions are generally housed in well-built premises and present a better outlook than the old banks; but from the business point of view, they are considered less sound financially. Tsinan native banks usually confine their activities to general banking business, such as loans, deposits, and exchange. They are seldom engaged in business of a speculative nature.

BUSINESS OF CHINESE NATIVE BANKS

Mr. E. E. Kann, a Shanghai banker, describes the business of the Chinese native banks as follows:

The native banks establish the official rates for internal exchange. They determine the official market rate for local dollars in relation to taels. They likewise fix interport quotations.

The native banks fix the daily native interest rate. This latter is of great importance to the economic life of China. It corresponds to the interest rate for call loans in the Occident. Native interest is quoted twice daily in candareens per 1,000 taels per diem. According to existing rules the upper limit for native interest is 70 candareens. If the quotation is given, for example, as 20 candareens, this corresponds to an interest rate of 7.3 per cent per annum. (Multiply the native rate by 365.) The native interest quotation is subject to factors similar to those determining the rate for call money in Europe and America, yet in China it is much more sensitive. Generally it is an excellent barometer for the state of the local money market.

Another branch of local exchange, left entirely to native banks, is the fixing of daily rates of exchange for small coin in silver, copper cents in terms of taels, and silver small coin pieces and coppers in terms of the Chinese dollar and vice versa.

All the quotations given out by the native banks in Shanghai are the result of regular Bourse proceedings, held twice daily, except on Sundays.

The following are some of the other categories of business as transacted by Chinese native banks:

Deposits.—Current accounts as well as fixed deposits are accepted, the latter carrying interest at a rate to be specially arranged. Up to the present, native banks have not been catering for savings accounts.

Current accounts are opened after a pass book has been sent to the depositor by the bank. The latter employs a special outdoor staff to report on the standing of prospective clients and to acquire new customers. All deposits are simultaneously recorded in the pass book, and all native orders issued by the bank on behalf of its client must be entered at once in the pass book.

In the majority of cases interest on current accounts is subject to the average monthly native interest rate, from which 5 per cent is deducted. Some of the larger institutions refrain from paying interest during the first and also during the last month of the Chinese year, because these embrace China's great settling days and holidays.

Interprovincial remittances.—Many native banks have branches in the principal trade centers of China and correspondents in others. Transfers are effected by means of drafts, letters, or cables. Drafts, when drawn at a usance of 3 to 10 days after sight, are subject to previous acceptance.

Loans and overdrafts.—Most of a native bank's clients receive shortly after the Chinese New Year a pass book, on the first page of which is written a brief by an authority to overdraw up to a given limit. In time of war or civil commotion, when business is thrown into confusion, the native banks are likely to stop granting further credits to clients, notwithstanding the written authority extended to customers in the beginning of the year. They even have the right to call for payment, without previous notice, of an overdraft already granted.

The rate of interest on loans is a matter of arrangement. Interest rates on overdrafts are calculated and debited monthly.

Issue of negotiable documents.—In place of money Chinese native banks often issue a sort of cashier's order written on a small slip of native paper, which is payable on demand to bearer, is negotiable as a bank note, and, like the latter, will not be replaced in case of loss.

In the lower right-hand corner there is a small seal meaning "clearing." This remark corresponds somewhat to the foreign custom of crossing checks and adding "& Co." The kind of document just referred to is given to lending banks by native banks, whenever the former grant call loans (chop loans) to the latter. It is typical that this kind of promissory note does not contain a due date, nor an interest clause, notwithstanding the fact that both have been clearly agreed upon, when the "chop loan" was negotiated. The intentional omission speaks well for the trust which the native banks bestow and obtain.

Foremost amongst the negotiable instruments issued by native banks is the native bank order, called, in short, "native order." It is issued by the bank at the request of its clients, to whose account the face amount is debited at the time the native order is issued; but the value date always corresponds with the due date of the native order. The latter is usually payable 10 days after date, sometimes 5 days and sometimes at sight; in the latter case the order is stamped "Tsi," meaning immediate. Other usances are admissible, but not common. The 10-day native order is the one principally employed for purposes of trade. All orders are actually payable one day after that on which they are due.

FINANCING BUSINESS THROUGH BANKS IN CHINA

SETTLEMENT OF ACCOUNTS

Among the Chinese, trade settlements are made twice each month, monthly, or quarterly, on certain festival days, and at the end of the year. Most business is done on the shorter-credit terms. The three festival days are very important for the clearing up of outstanding accounts, and the end of the year is the great settlement period for the whole mercantile community throughout the entire country. It is a custom among Chinese to settle all outstanding accounts before the dawn of the New Year. Chinese merchants do not discount bills for cash at any certain or fixed rates. They do, however, make deductions for cash payments, but each case is considered and treated individually. The rates of interest on money range from 1 to 2½ per cent a month.

PURCHASES BY CHINESE DEALERS

The Chinese dealer handling foreign goods generally makes his purchases through resident importers, who are, for the most part, foreigners (non-Chinese). The importer opens credit at home through his bank in Shanghai. Bills are drawn on him in letter of credit, accompanied by shipping documents. He accepts them generally on 90 to 180 days' sight. When goods arrive, bills of lading, invoice, and, if necessary, shipping papers are handed over to him by the bank, with indorsement. Goods are stored to the order of the bank. Landing and warehouse receipts are sent to the bank. The importer pays all charges. The Chinese dealer applies to the importer for the delivery of part of the goods, giving him a native bank order for an amount proportionate to the goods taken. The native order is sent by the importer to the bank, which issues a delivery order for the goods and at the same time credits the special account of the importer for the amount of the native order. When all goods pertaining to a certain bill are delivered and all the payments credited, the bank sends out its account for the original bill in local taels and remits the face amount to the home bank. The importer has the privilege of settling the exchange whenever he likes before the due date of the bill. Bills are generally renewed by the banks in China for a reasonable period, in case goods have not during the period stipulated been all delivered.

NATIVE BANK ORDERS

A document that plays an important part in trade transactions between foreigners and Chinese is the native bank order. The average Chinese business house carries accounts in a number of Chinese banks and pays its bills in orders on these native banks. The orders are in local taels and are postdated 10 days. The foreign banks charge a small fee for entering all native orders presented for credit—20 cents on each order, presumably the expense of sending a messenger to cash the order.

BANKS OF ISSUE

In Shanghai there are two classes of native banks (in addition to the modern Chinese bank) which issue money orders on a tael basis that are known to foreigners as "native bank orders" and to Chinese as "chwang piao" (tickets issued by banks). The two classes of banks are "hwei hwa," or registered banks, and "tiao t'ang," or unregistered banks. The registered bank is recognized by the native bankers' guild, the committee of which will settle all questions of dispute between banks and their clients or other parties. "Hwei hwa" means, literally, "to transfer," and "tiao t'ang," "to jump and strike." They are simply terms manufactured by the bankers themselves and convey no other meanings. The bank that registers itself at the guild must have a capital of at least 20,000 taels, while unregistered banks may open with any amount of capital and are not subject to the control or protection of the guild.

Notwithstanding the fact that "tiao t'ang," or unregistered banks, as compared with "hwei hwa," or registered banks, are looked

upon by the public in general as of inferior financial standing, they outnumber the hwei hwa and circulate their orders as freely as the latter, by reason of the fact that the Chinese mercantile community investigates the personnel represented by the bank's capital. Mere registration carries but little significance, and there are a number of banks in Shanghai organized by men of wealth but unregistered because they prefer to save the 1,000-tael registration fee. From the standpoint of the Chinese business community, it is the financial standing of the bank's proprietors and not the bank's stated amount of capital that determines the willingness of the public to accept the bank's orders as negotiable paper. For instance, one of the banks enjoys the highest public confidence, though its stated capital is only 10,000 taels. It is owned by a man who is known to possess personal and real property worth several millions.

In foreign trade it is the obligation of the comprador of the foreign firm to deal with only those Chinese banks whose proprietors are known to have a good financial standing, for in case of liquidation the personal and real property of the proprietors concerned will be realizable assets. Thus the comprador in a leading firm or bank usually keeps a list of banks whose orders are acceptable, and it is of prime importance that he should from time to time reverify the financial condition of their proprietors. The foreign business men or bankers take little or no trouble to investigate the financial standing of native banks with which they deal, relying almost entirely upon their compradors.

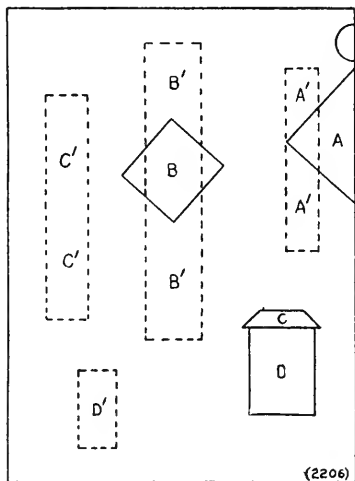


FIG. 7.—Native bank order

FORM AND NEGOTIABILITY OF BANK ORDER

In form the native bank order is very simple. It is a piece of yellowish Chinese paper, usually 4 by 5½ inches in size. There is no special printing distinguishing it from any other document. It is made out in the same manner as an ordinary Chinese invoice, containing red chop impressions and black-ink letters.

Figure 7 is an illustration of such an order. A and B in the squares show the chops of the banks issuing the order, but in the case of A only half the chop impression is shown, the other half being impressed on the page of a stub book. In the space C are two Chinese characters, meaning that the order is payable by transfer at the date of the order, and payable in cash one day after the date of the order. D gives the words "charges for collection" and the hour after which cash payment is not possible. A' A' in dotted lines show the numbers of the order, and B' B' in dotted lines the amount of the order. The amount is usually on a tael basis, but may, at the

request of the client, be on a dollar basis, which is unusual. C' C' in dotted lines show the date of payment. The lunar calendar only is used. A merchant when receiving a bank order usually sends it to his own bank for collection, and D' in dotted lines gives the chop impression of the bank to which the order is sent for collection, showing the words, "This order is payable only to ——— Bank; anyone finding it can not realize on it." In case the bank of collection sends it to another bank for collection, the bank to which it is sent usually cancels with dotted marks the chop impression given by the first bank for collections and chops thereon its own chop, showing similar words, except the difference in chop name. The half-circle mark above A in the half square means that the order has been certified by the bank of issue, the other half circle being impressed on the stub book. This circle mark is made with bamboo-brush pen in red ink. A bank order so certified carries with it the responsibility of the bank of issue, the responsibility of the maker toward the payee being thereby canceled. It is, however, important that certification of bank orders shall be made by the bank or banks to which they are sent for collection, for the banks of issue will not bind themselves if the orders are sent for certification by individuals or corporations other than bankers. When others send an order for certification the bank of issue will simply inform the bearer or holder of the order that it was issued by a bank, and it will not chop the circle mark as required. This circle mark is the essential of certification and is not obtainable by any person other than the banker. Chinese business men sometimes lose because they are ignorant of the requirements of this procedure.

TERMS

Among the trade in Shanghai the prevailing custom is to pay for goods obtained with a native bank order, 10 days postdated, with the date of issue and the name of payee not specified thereon. In a few exceptional cases bank orders are issued payable at sight. In this case the word "tsi," meaning "immediate," is usually written in bold writing on the date space of the order. The bank that issues such an order usually charges its client as if it were issued one day previously. Foreign merchants who are newcomers in Shanghai often require bank orders of this description, and Chinese merchants dislike on this account to deal with them. There are bank orders that are issued in terms of 3 or 15 days, postdated, but the prevailing custom among the business community is 10 days, postdated.

RESPONSIBILITY FOR PAYMENT

As explained, a bank order, once certified, must be paid by the bank of issue. It is the prevailing custom in Chinese banking circles for the banks of issue to pay their own orders, whether certified or otherwise; and should a bank be unable to cash its own orders, it is forced into bankruptcy at once. Thus the orders are negotiable and are almost as good as cash. Chinese merchants hesitate to take foreign bank checks in payment for their merchandise, as they do not know that checks can be certified as bank orders.

Another advantage in the use of the native bank order is that it can not be cashed by strangers, and, except for small amounts, it is

usually collected by the bank to which it is sent for collection. When a bank has been notified to suspend the payment of an order already issued, it is the usual custom of a registered bank to place in the bankers' guild the funds necessary for payment. These funds will be released only after all questions of disputed ownership are settled. Some foreign firms issue checks to their compradors for merchandise purchased, and the latter change them into native bank orders, 10 or 15 days postdated, to the payee. This is a handsome source of profit to compradors of large firms. Some merchants, however, knowing the advantage of dealing with native banks, utilize this system of paying by native bank orders instead of by check, and they effect considerable savings thereby.

However the case may be, foreign merchants must use native bank orders, either directly or through their compradors, since these native orders are used exclusively by Chinese business men in payment of goods or for redemption of mortgages. All the leading foreign banks accept native bank orders through the guaranty of their compradors. Many well-established foreign business houses accept such orders without certification at all and release the goods so paid. Especially is this the case when such orders are given by a known buyer of good standing. But the general practice among foreign banks is to have the order certified before its acceptance. Among business houses acceptance is left to the comprador, who usually accepts without certification if firms or merchants are of good standing.

CHINESE BANK CHECKS

There is another form of money order used to some extent by Chinese merchants, called "chih tan," or check, for which the bank against which it is issued accepts responsibility limited to that of the person against whose account it is drawn. The check book of these banks is in three parts—first, the stub; second, the check proper; and, third, the advice for sending to the bank by drawer as advice of issue. The bank chops across a portion of the second and third parts its seal, or chop, so that when the check is presented for payment it may agree with the advice already received.

The customs and practices above outlined have developed in a country in which a body of law and legal procedure is in the making, so that merchants have had to devise ways and means of protecting themselves in business transactions and in documents used.

For detailed information regarding the financing of imports into China, see the chapter in this handbook on China's import trade. For information regarding financing exports, see the chapter on Chinese exports.

[A list of foreign and modern Chinese banks in China may be secured by application to the Bureau of Foreign and Domestic Commerce, Washington, D. C.]

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CREDIT CONDITIONS

By Consul J. C. Huston, Tientsin

Credit in China as elsewhere depends on many varying factors, such as local conditions, local customs, the nature of the goods, and the standing of the buyer—this latter consideration being most important in China. Very few Chinese firms ordinarily have direct dealings with foreign countries, partly because they are unfamiliar with foreign business practice and do not understand foreign methods or foreign languages. The Chinese system of local finance is, however, the determining factor which acts to preclude successful direct dealings. In the majority of cases the Chinese prefer to deal through a local foreign firm with whose personnel they are acquainted.

Where a Chinese concern has direct dealings with a foreign country it is generally a large industrial establishment, the manager of which is experienced in foreign procedure. Such concerns occasionally give large orders, and they usually expect that the goods will be delivered before they are asked to pay for them, a point of view with which exporters in the United States are not always in sympathy. The reluctance of the American manufacturer to accept any of the risks of trade abroad sometimes assumes a serious aspect in the case of large industrial concerns.

Despite the internal credit system and the language difficulty, the local foreign firm with its Chinese staff is in a position to obtain up-to-date information. The manufacturer in the United States can not compete with the local foreign firm in this regard because of his lack of knowledge of local conditions. The usual procedure is to have one of the local foreign firms experienced in handling general lines act as the manufacturer's representative. The representative then handles the question of the credit to be extended to the local Chinese buyer and assumes the responsibility therefor.

Considered from a credit point of view, foreign firms in China can be divided into three general classes.

1. The large houses which have branches in many parts of the world and may be called international in their organization. These firms have offices in the United States, Great Britain, Germany, and other countries, through which they do their buying. The financing of the business is attended to by the head offices, which are usually situated in some European or American city where advantage can be taken of the low rates of interest prevailing. In consequence, the local office does not have to trouble itself with questions of terms and credit. The drafts drawn on them by their head office or other branches are purely an internal affair of the company.

2. There are some far eastern houses which work more or less independently and arrange their own financing. They usually have relations with export houses in the United States or Europe. Such export houses act as agents for the far eastern firm and attend to the

buying, paying cash to the manufacturers, or securing such credit as the local custom of the particular trade permits. The export house frequently grants the necessary credit to the firm in the Far East. In some instances export houses in Europe send goods on consignment to such concerns.

3. The small, strictly local firms, working with limited capital and with no correspondents abroad. Usually the manager of such a concern has had a long and varied experience in dealing with the Chinese. European exporters are often much more liberal to buyers of this class, to whom the American exporter rarely gives credit. The Continental and British export houses lay more stress on the personal characteristics of the manager than does the American manufacturer or exporter, and in dealing with firms of this type the personal equation is the important factor.

The local banks are in a position to know how much credit to extend to foreign firms. The head offices of American banks having branches in Tientsin can furnish or obtain credit reports on any local firm.

Loans and overdrafts are granted on approved securities, on goods in the bank's own or a neutral godown, and on imported goods that have arrived without a bill of exchange or have been paid for. The margin ranges up to 60 per cent, depending on the market price of the goods on the day when the overdraft was granted, as well as on their perishability. Collection of bills, either in China or other parts of the world, is undertaken at a commission ranging from $\frac{1}{4}$ to 1 per cent.

EXPORT CREDITS

Export credits are given in the form of export overdrafts, that is, packing credits; while the banks also handle deposits and exchange, and obtain credit information. When a foreign bank grants a packing credit to a foreign firm it allows the firm to draw on the bank up to practically the full value of the goods to be shipped. In this case the bank generally expects, and sometimes insists, that an equivalent amount of exchange be settled with them before the credit is granted. In return, the firm gives a letter of guaranty in which it undertakes to hold the cargo at the disposal of the bank fully insured against all risk. The interest charged is from 7 to 8 per cent, and the goods in question may be stored in the firm's own godown (warehouse), or in a godown designated by the bank. The arrangement continues for a period long enough to allow the firm to buy up the goods, pack, and ship them. The firm obtains the bill of lading, insurance policy, consular invoice, and other documents, drawing the bill at 90 days', four or six months' sight, as the case may be, for the full amount of the invoice, including all charges. If a credit has already been opened, the bill will be drawn in accordance with the terms of credit. If no credit has been arranged, the bill will be drawn on the firm to whose order the goods are shipped. In either case, the firms hand over to the bank from which they obtained the packing credit, their bill, accompanied by all the documents. When the local bank receives the bill with the documents attached, it debits its bank in the United States for the amount, and credits the firm in taels, against the packing credit originally granted.

IMPORT CREDITS

It was formerly the practice in Tientsin for import firms selling merchandise to Chinese dealers to quote gold prices, in order to avoid risk in the fluctuations of the rates of exchange. In recent years, however, the Chinese have tended to insist upon c. i. f. or ex godown quotations in local (silver) currency, which makes doubly evident the advantage to the American exporter of dealing through a firm on the ground. In the new standard contract forms, the Chinese Piece Goods Association insists that prices be stated in Tientsin taels. This is the result of the foreigner's demanding that exchange be settled at the time the contract is signed, in order to prevent gambling on exchange.

When goods are ordered from the United States, the import firm may or may not open a credit. The usual practice is to open a credit in favor of the American exporter or manufacturer, as the majority of American exporters and manufacturers demand payment against documents in America. If business of any size is to be done, the American exporter usually insists upon a confirmed banker's credit, which means that he will get his money at the point of shipment, or at some one of the large shipping centers in the United States, upon delivery of his documents to the designated bank and without further recourse.

Insisting upon confirmed banker's credit is really equivalent to demanding that cash be paid across the counter, without recourse, and leaves the purchaser at the mercy of the exporter. It is equivalent to buying at "sight unseen." No manufacturer at home would think of requiring that the wholesalers, jobbers, or retailers pay cash with their orders, for business could not be done on this basis at home. Yet the same manufacturers try to conduct their export business on a cash-order basis. Competition in this field is just as keen as in the domestic trade, and if American manufacturers are to develop a large export business they must conduct it on terms in line with competing foreign manufacturers. The manufacturers of other nations conduct their export business in a way that affords greater elasticity as to credits, relying largely on the local firms who represent them. Before business is booked the standing of the buyer is investigated and, if satisfactory, goods are sold on the equivalent of usual domestic trade terms, but under the control afforded by secured draft for acceptance or payment.

When a British or Continental exporter ships to foreign countries the merchandise is sold on the usual credit basis, the drafts being drawn from 90 to 120 days' sight, but goods are not deliverable to the buyer until he has paid or accepted the draft, as the case may be. Manchester houses ship piece goods to China under what is known as a documentary credit, in which both the drawer and the drawee are responsible until the draft is retired. German firms have recently issued circulars offering to ship goods, drawing for 50 per cent of the value, balance to be remitted on sale of goods.

If credit risks in China could be investigated before business is booked and goods shipped, as they are in domestic business, a large, safe, and remunerative foreign business could be developed; but this is not possible under existing conditions, except as to non-Chinese firms. The main reliance as to Chinese credit risks, there-

fore, must rest in the foreign (non-Chinese) firm on the ground. A small business in groceries and sundry articles is done by the American exporter, who draws on the importer here at 90 or 120 days' sight, documents to be delivered to the drawee upon payment; but business done on this basis does not run into any large figures.

The foreign import merchants desire from Americans who interest themselves in this market such terms of credit as will enable them to meet terms offered by European exporters—terms which are frequently such that the local firm can sell the goods before paying for them. In other words, if liberal credit terms are granted, it allows for a larger turnover, since any one given firm does not have to tie up so much of its capital. If the goods are sold before the due date of the draft, payment is supposed to be made at once, though probably in actual practice there is frequent delay through the desire to secure more favorable exchange, or for other reasons.

On the arrival of the draft and documents, the bank advises the foreign firm, which in turn communicates this information to the Chinese dealer. As a usual thing, documents arrive here much in advance of the goods themselves. Upon arrival of the goods, the firm requests the bank to let it have the shipping documents. The firm then attends to clearing the goods through the customs and to paying the duty as well as the storage in one of the public godowns, which issues a landing account to the order of the bank. This is sent by the importer to the bank to be held pending payment of the bill.

When the transaction is first entered into, if it is in a gold currency, it devolves upon the Chinese dealer to decide as to when he prefers to settle the exchange involved therein. Chinese dealers are usually allowed to take delivery of the goods in installments, paying the equivalent in taels to the import firm. The dealer usually pays for his installment by a native order, generally due in 10 days, and regarded as the equivalent of cash. As a rule, he is given two months in which to clear cargo from the godown.

The import firm, upon receiving the native order, will give a delivery order on the bank, at the same time sending the native order to the bank to be credited to the firm's account on due date. When the bank has ascertained that the native order is correct, it gives to the importer a delivery order on the godown company. This order is taken to the godown company, which makes the necessary entries on its account books. The amount due on the bill at maturity is debited to the import firm's account.

THE COMPRADOR

Practically every foreign firm in China employs a comprador, who guarantees all contracts for the foreign firm. He is generally some wealthy, shrewd Chinese merchant in the locality, who is willing to handle the firm's business at a profit. For all practical purposes he takes all the responsibility for the firm's transactions with the Chinese dealer. It is a basic principle that the comprador of a foreign firm guarantees the commercial morality and financial standing of all Chinese firms introduced by him to the foreign firm. The usual procedure is for the comprador and the foreign firm to enter into a written agreement, which forms the basis of all their dealings.

It may happen that the fundamental principle underlying all comprador agreements—that is, that he shall guarantee the financial standing of all Chinese firms—is slightly modified, according to the desires of the signatories. The agreement stipulates a given sum, which is usually a cash guaranty put up by the comprador upon signing the agreement.

One might think that where the comprador is responsible to the firm under contract all responsibility is taken off the foreign manager's shoulders, but this is not the case. It is true that the comprador is bound by his contract and puts up a guaranty either in cash or land deeds, or both, but he may handle business worth \$2,000,000 or \$3,000,000, while his security is only \$50,000 or \$100,000. If the market goes against him in any particular deal it might happen that his security is more than wiped out. Naturally the foreign manager has to protect himself by taking certain precautions.

In buying native produce for export the comprador, with his native staff, for a consideration mentioned in the agreement (usually 1 per cent), undertakes to quote a price in a recognized and reliable local currency, there being many currencies throughout the interior where the goods are purchased. This commission may be increased or decreased on special contracts by special arrangement. If any of the dealers whom the comprador recommends to the firm refuse to take delivery of a given cargo and it is found necessary to resell it, no commission is paid. In purchasing export cargo the foreign concern may buy through the comprador or, if expedient, may buy direct from the dealers. The comprador usually signs all contracts between the firm and the local merchants where export cargo is purchased, and is under contract to make good in case of loss.

The Chinese dealer, in negotiating with the firm for the purchase of imports, deals with the comprador or one of his staff, and signs one of the firm's contracts in Chinese and English. In addition to commissions the comprador receives a nominal salary. In return he must employ an adequate native staff, no member of which can be engaged or dismissed without the consent of the foreign manager. The comprador pays the salaries of all his native staff. They are responsible to him and he, in turn, is responsible to the company for any losses suffered through any of their acts.

The comprador is also responsible for all native bank orders and for the safe custody of all goods stored in company's godown. The comprador, in his turn, demands guaranties of all the members of his staff.

EXCHANGE PROBLEMS

Probably the most difficult problem connected with trading in China is the handling of foreign exchange. Skill in exchange comes only through actual practice, and it is the one difficulty on the careful handling of which depends the success of every foreign transaction. Rates fluctuate daily and hourly. The foreign firm finds it very difficult to persuade the Chinese buyer to cover his exchange. If he does not cover when he signs his contract, it may happen, in the case of a contract entered into in gold, that he is called upon to pay double in local currency when the goods arrive. During the late war Chinese products were in demand and business was brisk.

When the boom was at its height, the value of the local silver dollar suddenly began to drop. Chinese merchants had placed large orders abroad, especially in piece goods, and, when the bottom in exchange was finally reached, a host of dealers found themselves in an impossible situation, with all their reserves wiped out. They had neglected to cover themselves and millions were lost in repudiated contracts. This risk of exchange has been more or less minimized by the present practice of fixing the price in silver, which leaves the settlement of exchange in the hands of the foreign importer.

The Chinese dealer is supposed to take delivery of cargo immediately upon arrival; but under ordinary circumstances no more than 60 days is allowed for clearance from importer's godown. Because of present business conditions in China most of the more responsible firms demand 10 per cent bargain money on the signing of the contract. Other firms vary this by demanding 10 to 25 per cent, depending upon the commodity imported. If it is a standard commodity which is imported, and if upon arrival the dealer refuses to live up to his contract and take delivery, the importer should be able to sell it to other dealers at the market price and not suffer loss, as he is covered by the bargain money. If the commodity imported is classed under the head of specialties, bargain money to the extent of 25 per cent might be demanded.

ADVERTISING AND MERCHANDISING

By Carl Crow

There are doubtless more different brands of trade-marked articles on sale in China than in any other country. Probably 500 brands of cigarettes could be counted in the stock of a store in any large city, and the brands of toilet soaps, perfumes, and cosmetics run into the hundreds. Although American canned goods are the most popular, it is possible to buy in Shanghai, Hankow, Tientsin, and other large cities, not only all the leading American brands, but many French, Italian, Japanese, Australian, Indian, and Chinese products as well. Even in the small interior cities one will find in the general stores a surprising variety. In a small grocery store in a market town in Shantung were counted six American brands of canned meats, four English, and one Australian. The same shop sold two kinds of French canned butter and several American and Australian brands of cooking butter and oleomargarine.

This great variety of goods is due, first, to the low import tariff. In most tariff countries there is a rather high import duty on proprietary articles, but in China the duty forms so small a part of the retail selling price as to be negligible, and does not prevent the speculative importation of brands for which there is a doubtful market. The second reason is the retarded development of Chinese manufacturing. To-day many articles of world commerce are manufactured in China, but with a few exceptions they are inferior to the imported article, although steadily improving. At any rate, the competition of goods of Chinese manufacture, except the coarser piece goods, matches, flour, and a few other articles, does not interfere with the sale of imported goods, for the Chinese consumer of high purchasing power recognizes the superiority of the imported over the domestic article.

If the history of any of the more modern brands of foreign goods in the Chinese market be studied, it will be found that all the successful ones have been established by sound merchandising methods, usually backed up by advertising. Any manufacturer of commodities dependent for their success upon a large consuming public, who hopes to succeed in this highly competitive field to-day, must be willing to make a thorough study of the problems involved and be ready to adapt his ideas to conditions which are peculiar to China. Without a carefully worked out system of merchandising, backed up by an adequate advertising campaign, he may expect, at best, mediocre sales.

PACKAGE GOODS

Before placing a new article on the market in China it is very important to make sure that the packaging is right. This does not necessarily mean a special package, for as a rule any package successful in America would be successful in China. But it must

not be forgotten that the Chinese attach a significance to colors, animals, birds, flowers—in fact, to all natural objects—which is not shared by westerners. Like ourselves, they view some animals with aversion, but not the same animals. Combinations of colors which would be meaningless to us might create a distinctly favorable or unfavorable impression on a Chinese, depending on their meaning to him. With this generalization in mind, the four main considerations with respect to the package may be stated as follows:

1. The package should be one that can not be easily imitated. If the label or mark can be easily copied, imitation of a brand is almost certain to follow the success of the original in China, and imitation should therefore be made as difficult as possible.

2. The package should bear a striking picture, design, or combination of colors which will enable the illiterate consumer easily to identify it. Even if a part of the label is in the Chinese language, the picture device is important, for comparatively few Chinese have an extensive knowledge of their own language.

3. The package or label should not have a cheap appearance. The Chinese are close observers of detail, and it is hard to convince them that an article put up in a shabby package has any superior merit.

4. Some consideration should be given to the possible utility of the empty container. Empty bottles, jars, and tins of all kinds have a definite value in China, and are kept and used. A certain brand of American breakfast cereal has a distinct advantage over its competitors because the lithographed tins in which it is packed have a value of 10 to 20 cents each. For the same reason a toilet cream packed in a jar is more popular than one put up in a collapsible tube.

The value of the packing case itself will be taken into consideration by Chinese dealers. It is said that in the case of one widely distributed and very popular cigarette, the distributors, who break up case lots to supply the small retailers, sell the cigarette for exactly the price they pay for it, making their entire profit from the sale of the tin-lined packing cases. Once a package is decided on it is of the utmost importance that no change be made, or if a change is necessary that it be made very carefully. Many instances might be given in which a prosperous trade in an article has been killed entirely by an arbitrary change in the packaging.

BRAND NAMES

The selection of a Chinese name for the brand is as important as the packaging. Brand names can seldom be translated into Chinese characters, nor can the sound be accurately transcribed by Chinese phonetics, except, of course, the names of flowers, birds, animals, or other objects of nature.

The size of the shipping case also deserves consideration. In general the small case is preferable to the large one. Goods shipped into the interior are often transported on the backs of men, pack animals, or on wheelbarrows, and the small case is more easily handled. Customs formalities and the regulations which have been described elsewhere make it both troublesome and expensive to fill orders with broken-case lots. Moreover, the retailer, even the very

small dealer, invariably wants his order filled with goods in the original cases. Ever suspicious of substitution, he demands that the goods sold him bear the shipping marks on their containers as proof of the actual fact of importation.

DISTRIBUTION

The manufacturer who seeks to establish a market in China should first visualize the methods through which his goods are to be introduced into the country. The average Chinese mercantile house resembles somewhat the old-fashioned American country store—an establishment which stocked all kinds of goods, bought and shipped country produce, and often did a flourishing business, with no advertising and little selling effort. The import house on the coast of China usually handles dozens of agencies—often as diverse as typewriters, tooth paste, structural steel, motor cars, paints, canned fruit, pianos, and candy. In addition it is not unusual for the firm to handle fire and marine insurance and sometimes a steamship agency. These concerns, like the old country store, largely depend upon the customers coming in to buy. In the early days of foreign trade in China there was nothing else to be done. With the barrier of language between the merchant and his customer and with travel in the interior difficult, if not impossible, the importer contented himself with attending to the details of shipping, finance, and customs formalities in connection with his imports and left the selling effort mainly to the attention of his Chinese staff. Of recent years there has been a tendency toward specialization, and there are a few firms now which handle nothing but allied lines, such as printing machinery and supplies, drugs and chemicals. These specialty houses are in some instances building up selling organizations.

But the old-fashioned import house still predominates in China, and it is this kind of an organization which will usually handle the agency of the American manufacturer. Ordinarily it will have no machinery of distribution and selling, even though it may have branches in Tientsin, Hankow, Canton, and other treaty ports. The bulk of the distribution to the retailers of the interior will be done by groups of Chinese jobbers or traders who order the goods from the import houses. Usually the jobbers settle their own exchange—that is, they buy at gold prices and arrange a rate of exchange which they believe will be favorable to them. Under this system most import houses will accept orders from any jobber who has the necessary cash or credit.

The system has several obvious defects. As the jobbers buy at gold prices and each settles his own exchange, no two shipments are likely to arrive at the same silver price. Thus the jobber who purchases under an unfavorable exchange may be forced to sell at a loss if obliged to compete with those who were more fortunate in their exchange transaction. The retailer buys at varying prices, and as a result there is no uniform retail price. One shop may be able to make a fair profit on an article retailing at 50 cents while a neighboring shop would lose money on sales at that price. The result is that the second shop may try to sell a substitute and hold on to its old stock until a favorable turn of exchange will make it possible

to sell at a profit. Another unfavorable aspect of this system is that when exchange is unfavorable jobbers will not order and the market runs out of stock, while when exchange is favorable the market may become flooded, and dealers who are unable to sell dump the goods on auction.

The most successful importers now make an arrangement to sell at a fixed silver price, absorbing the fluctuations in exchange. This is usually arranged by fixing the silver price at a rate favorable to the importer or manufacturer and then granting a sliding scale of discounts as exchange moves up or down. These discounts are given to the jobber, and a part of them at least are passed on to the retailer, but they have little or no effect in changing the price charged to the consumer. The Chinese retail shops have what appears to an American to be an extraordinarily large number of salesmen. They receive very low wages, but once a year, just before the Chinese New Year, they receive a substantial bonus from a fund made up in part from the profits of the shop, the sales of empty cases, the proceeds of special discounts and free-goods allowances, and from the sale of samples. The discounts therefore have the effect of stimulating the retail salesman to great efforts to dispose of goods on which discounts are granted.

In order to secure a still greater control over distribution, the modern importer is inclined to restrict the number of jobbers to whom he will sell. In one case which has been a very conspicuous success the importer has limited the number of accepted jobbers to 10. They have entered into a contract whereby the importer agrees to sell only to them at a certain fixed price in local currency, subject to certain discounts. The jobbers, on the other hand, agree to sell to the retailer at a fixed price and to pass on to him a certain proportion of the special discounts. Under a complete development of this plan the whole sales territory is divided into districts in each of which there is one distributor, or a group all bound by similar contracts. The importer protects each distributor by absorbing transportation costs, so that the landed cost to the distributor in the interior will be the same as to the distributor at the port of entry.

Having arranged the method of distribution, the question of the employment of special salesmen is one which depends on the article and the margin of profit which is allowed the jobber. In some, perhaps in most cases, the jobbers employ the salesmen and pay their wages; in others, the importer or manufacturer trains and employs special salesmen whose orders are turned over to the jobbers for execution. This is more often done when the manufacturer is represented in China by his own factory representative, a man who takes complete charge of the advertising and selling, leaving to the importing house only the details of caring for shipping, insurance, banking, credits, and such matters.

ADVERTISING METHODS AND MEDIUMS

The mediums and mechanics of advertising in China do not differ materially from those of America or any other country. Newspapers, periodicals, posters, painted bulletins, circular letters, calendars, dealer helps, window displays, and samples are all used, much as in America. It is in the preparation of copy and in detail that a wide

divergence from American methods is necessary. No matter what the article may be, the Chinese, with different tastes and different customs, will look at it from a different point of view—just as a child will often put a new toy to uses for which its makers never intended it. Some years ago an American manufacturer noted that there was an extraordinarily large sale in China for the small hot-water bags which are usually known as “neuralgia” bags. On investigation it was found that Chinese girls were buying these bags and carrying them in their muffs as hand warmers, and to hold against their faces to give them red cheeks. In certain cosmetics the odor outweighs all other considerations. Toilet soap is known in the Chinese vernacular as “perfumed” soap, with the result that a toilet soap not highly perfumed is regarded as an anomaly, as we would regard an odorless cologne. In the matter of cigarettes, the Chinese have a very decided and definite taste. The tobacco must be of a light yellow color, the cigarette perfectly round and firmly made. If the name is stamped on the cigarette in gold, it is all the more pleasing. The Chinese are most discriminating buyers, paying a great deal more attention to all the details of an article than do other peoples.

CAMPAIGNS

It follows, therefore, that the preparation of advertising copy should be undertaken only by one who is familiar with Chinese psychology, with the tastes and habits of the people. Advertising campaigns which are worked up in detail in America are nearly always failures, and often are ludicrous. A few years ago an American company spent many thousands of dollars advertising its brand of milk in the Chinese papers. It emphasized the use of its milk with coffee and tea and for cooking various dishes. The Chinese have not yet learned to produce or use dairy products. Neither milk nor butter is a constituent of Chinese dishes. Coffee is unknown to them. Tea is the national beverage, but not the heavy India or Ceylon teas which require “cream,” to make them palatable. The Chinese would no more think of putting cream in their tea than we would think of putting it in lemonade.

The most successful advertising campaigns are those which have been worked out by experienced foreigners resident in China, with the help of trained and educated Chinese. Even in China the preparation of copy is by no means easy. That which is to appear in all parts of the country needs careful checking by natives of the different Provinces. While the written language is the same all over China, and while three-fifths of the population speak what is known as the Mandarin tongue, yet with the remainder the spoken language and the pronunciation of the written characters vary so greatly that natives of neighboring Provinces, sometimes even of neighboring counties, can not understand one another. Moreover, no other language is so rich in opportunities for the perpetration of puns, and the Chinese are inveterate punsters. It will often happen, unless the matter has been most carefully checked, that an advertising phrase or brand name which is quite suitable and effective in Shanghai is turned into a vulgar or ludicrous pun in Canton.

When all is said and done, there is only one rule which may be laid down for the preparation of copy, no matter whether it be for

newspapers or posters, and that is that a picture of the product must be shown and, if possible, its uses illustrated. So large a proportion of the population being wholly illiterate, the ideal advertisement would be one complete in its picture without one word of text.

Advertising does not meet the quick response in China that the American advertiser is accustomed to in his own land, but on the other hand the effect is more permanent. In America it is customary to plan advertising campaigns on an annual basis; in China the period should be longer, probably a three-year period. Short campaigns in China rarely have been successful, and many American advertisers have made the mistake of discontinuing their campaign after one year, because of poor returns, when another year might have brought very satisfactory results. British advertisers in China have shown better judgment, for they plan their advertising over a term of years, rather than of months, and stick doggedly to it even when the early returns are most discouraging. The sum of \$50,000 spent on advertising in China will achieve much better permanent results if spread over a period of three years than can be accomplished by a lavish expenditure of the entire amount in one year.

MEDIUMS

Newspapers and magazines.—Chinese newspapers offer the most popular and in many ways the most effective advertising mediums. Daily newspapers are published in about 60 cities. There are probably 200 dailies which have been established for some years and which are on a fairly permanent basis. In Shanghai there are two papers with circulations above 50,000 each, the audited statement of one showing a circulation of 63,000. No other Chinese daily has a circulation of more than 25,000, and very few more than 5,000. These figures, however, mean more than they would elsewhere. Papers are not read and thrown away in China, but are passed on from one family to another so that a single copy may be read by four or five families. An average of 10 readers to a copy is a conservative estimate.

Rates in all Chinese newspapers are very low. The minimum rate in the Shanghai paper with a circulation of 63,000 works out to about 75 cents (United States currency) per column inch, less than one-fourth of the rate charged by the average American newspaper with the same circulation. In the smaller papers rates are so low that they are not figured on a square inch or column basis, but there is a monthly rate for quarter pages, half pages, etc. Almost all Chinese newspapers are subsidized by a political party or an individual politician, so that it is not necessary to depend on advertising and subscription revenue as in America. The number of newspapers published in any city will be found to depend almost entirely on the political activity of the place. There are usually about 40 dailies in Canton and an equal number in Peking.

Keyed advertisements in the leading Shanghai papers have often been used and give a fairly accurate idea of the pulling power of the papers.

A sample packet of a liver pill was advertised in a Shanghai newspaper, one full page and two half pages being used in one week, at a

cost of approximately \$300 silver. The offer was to send samples in return for a 3-cent stamp. The replies received numbered 5,240, at a cost of a little less than 6 cents each. The paper at that time had a circulation of less than 50,000. An identical offer of samples of a nerve pill was advertised in another Shanghai paper and brought 4,817 replies at about the same cost—6 cents each. Replies to a small advertisement offering to send a sample box of pen points for 40 cents cost an average of 59 cents each in one Shanghai paper and 65 cents in another. Invariably the cost per reply is higher when the smaller outlet papers are used.

A tabulation of returns from mail-order advertising in the leading Chinese papers of Shanghai shows the following percentages of replies from the various Provinces: Anhwei, 4 per cent; Chihli, 8; Chekiang, 16; Fukien, 7; Honan, 4; Hunan, 3; Hupeh, 6; Kansu, 1; Kiangsi, 4; Kiangsu, 35; Kwangtung, 1; Manchuria, 2; Shantung, 3; Shensi, 1; Szechwan, 6; scattered, 2.

Advertisers who plan to use the Chinese newspapers should realize the mechanical and other limitations of the publications. With the two large Shanghai papers mentioned it is possible to make contracts for bulk space and work out complicated schedules which will be fairly well carried out. With papers next in size and importance, as in Hongkong, Hankow, and Tientsin, it is possible to arrange for a fixed space to appear every other day, once a week, twice a month, etc., though a rate proportionately very much higher than the daily rate is charged for this. In the case of papers in smaller places only fixed space and position advertisements, to appear every day, are accepted. These papers will not or do not take care of changes of copy. It is customary for the advertiser to send out one stereotype plate to the paper and allow it to run until it begins to wear out, and then replace it with a new plate. This method is crude and unsatisfactory, but it is the only one that can be used until Chinese publishers have made more progress. It follows that all Chinese papers are crudely printed and that only coarse line drawings can be used. Half tones are out of the question except in the large Shanghai papers.

Not more than a half dozen newspapers issue printed rate cards, but every paper prints its rates on the front page. These rates are based on different scales of measurement, but are usually "per line"—the line being one line of Chinese type, about pica size, and extending up and down one-half the length of the column, usually 10½ inches. No one of any experience ever pays these published rates, and they usually have a very remote connection with the rate actually charged. All the newspapers in any one city usually publish identical rates, no matter what the circulation is. Smaller papers feel that they would lose "face" by publicly admitting that they accepted advertising at a rate lower than that of the leading paper. Each paper has an elaborate and more or less select scale of discounts, but usually the final rate is determined by negotiation. With the exception of the few Shanghai papers, there are no fixed rates, and the only way to secure rates which are at all reasonable is either to place the advertising through some reliable agency or to employ some one with experience in dealing with the papers and a knowledge of what rates should be paid.

There are a few weekly and monthly magazines which have a national circulation, but the most popular has a circulation of less than 30,000. The trade press is just beginning development. There are periodical publications devoted to electrical engineering, health, drug trade, cotton milling, banking, and mining, all of very limited circulation.

The various foreign mission bodies issue evangelical publications, some of which may be used for advertising. Although circulations of these papers are in some instances large, keyed advertisements in them have brought very poor returns. A possible explanation may be the low purchasing power of the average convert to Christianity.

Besides publications in the Chinese language, there are a number of daily, weekly, and monthly publications in English, French, Japanese, Russian, and German. Dailies in the English language



FIG. 8.—Advertising American cigarettes

are published in Shanghai, Hankow, Harbin, Tientsin, Peking, and Hongkong. The highest circulation is about 5,000, though one American paper in Shanghai claims a Sunday circulation of 10,000. These papers reach a class of readers of very superior buying power, the foreign communities of China consisting, with the exception of the missionaries, largely of men in executive positions.

Outdoor advertising.—Newspaper advertising must be supplemented by outdoor advertising if the masses are to be reached. It can be easily understood that with a proportion of 80 to 90 per cent of the population illiterate, outdoor advertising for any article to be used by the public plays a very important rôle. The forms of outdoor advertising most favored are posters, painted bulletins, painted walls, and electrical displays. Posters are most generally used, the most popular size being one sheet (30 by 40 inches). These are "sniped" on dead walls, though the general tendency now is to

abandon "sniping" and place the posters on permanent boards which are erected on leased locations. One advertising company in Shanghai has about 15,000 of these locations in 75 cities in the Yangtze Valley. The posters are changed every month, and the boards are rented at an annual charge of \$6 per board. These small boards are standard for the greater part of China, for the narrow streets do not allow of larger displays in the most thickly populated parts of the cities. A similar service is under development in Hongkong and will probably be extended to cities in South China.

In Shanghai there are now a large number of standard 24-sheet boards and painted bulletins, some of them equal in appearance to the better boards in America. There are a few such structures in Hankow, Tientsin, Harbin, and Hongkong, and as displays of this kind are popular in all cities, there is no doubt but that many more will be erected. Rates for displays of this kind are rather higher than in America. All the materials from which the structures are made are imported—lumber, nails, steel, paint, etc.—and so have a higher value than in America. Owing to climatic conditions a greater ratio of depreciation must be allowed. Locations are scarce and real estate values high, so that a rather high rental must be paid. In addition, there are municipal taxes on all outdoor advertising, in nearly all cities ranging from 0.05 tael per square foot upward. Rental for standard size 24-sheet poster boards or painted bulletins range from \$35 to \$55 per month. Painted bulletins are generally repainted every four months.

Painted walls and painted bulletins are of odd sizes, 10 by 10 feet, 10 by 20 feet, etc. Some of the bulletins are located on low roofs, balconies, or walls. In Shanghai the average monthly rental would be about 12 cents per square foot per month. Few bulletins are used outside of Shanghai. In the smaller places, such as Nanking and Ningpo, there are many painted walls available, the cost being about 5 cents per square foot per month. These walls are usually repainted every six months.

Chinese officials have in the past few years seen an opportunity to secure additional revenue through the taxing of outdoor advertising, and taxes of some kind are levied in nearly all cities. In most places the tax is nominal and really serves a good purpose by eliminating cheap advertising. In other places, such as Tientsin, it is prohibitive.

The placing of outdoor advertising in any Chinese city must be done on a basis quite different from that which may be used in America. In any American city a very large part of the population moves several times a day from the residence to the business section, and by placing bulletins along the main arteries of travel it is possible to reach practically all of the population of the city. In a Chinese city there is no residence section sharply divided from the business section. The city is made up of many small shops and factories, and the owner with his family and apprentices invariably lives over the business premises. His tea-house and the shops which he patronizes are all in the immediate neighborhood and his activities rarely take him outside of a radius of a few hundred yards. This means that outdoor advertising must be so placed as to reach all the individual communities. Instead of a few large signs it is necessary to use a large number of small ones.

Electrical signs.—Electrical displays and illuminated bulletins and posters are very little used in China. Except in the more modern and semiforeign cities there is very little night life, the entire Chinese population retiring behind closed doors with nightfall. Street-car advertising is equally unimportant. There are street cars only in Shanghai, Tientsin, Hongkong, and Peking, and the type of cars used, except in Hongkong, does not lend itself to the display of advertising.

Store hangers, tackers, and shop signs are used, though their use has been fully developed only by the tobacco and proprietary medicine companies. In Shanghai shopkeepers with good show windows in the busiest parts of town rent their windows, some rentals running as high as \$75 gold per week for one window. As elsewhere, shopkeepers are sometimes careless about giving a proper display to advertising material which is sent them instead of being put up by the advertiser's employees.

Samples.—The distribution of samples is a very effective way of introducing a new article. With a people of such restricted purchasing power, however, a sample, no matter how small, has a certain market value; and unless precautions are taken, the samples will end up in the hands of those whose sole desire is to sell them. If the samples can be sent through the mails, the most effective method of distributing them is by means of newspaper advertising, the sample being sent in return for a certain value in postage stamps. Free offers should never be undertaken because the result will be a deluge of requests from irresponsible people. An American manufacturer once advertised free samples of toilet articles to all who would call at the office of his agent. The result was that the street was so blocked with small boys and coolies that the agent faced a police court charge of impeding traffic.

Mail advertising.—Circulars and circular letters are sent by mail in China at a very cheap rate. The Chinese post office undertakes the distribution of trade circulars and handbills at a price of 10 cents per hundred, in addition to the bulk postage charge on the circulars from point of origin to the point of distribution.

Calendars.—Calendars are widely used for advertising purposes, and some of the calendars distributed at Chinese New Year are real works of art. The calendars are in great demand, as some of them are readily salable at as much as 50 or 60 cents each; but considering the high cost of calendars, it is doubtful that their distribution is ever justified by the advertising results obtained.

ADVANCING TRADE THROUGH MOTION PICTURES

By Commercial Attaché Julian Arnold

In the motion-picture film American manufacturers have an agency which can be used in a very effective manner for the furtherance of their business in China. The value of motion pictures as a medium of publicity and education in developing trade with oriental peoples has not yet been fully appreciated by business men, but there can be no doubt of the effectiveness of the film and in time this is sure to be realized and utilized. The motion-picture film serves as a universal language in communicating the ideas of people of different languages to each other. Language is, after all, the medium of expression by which men transmit to each other mental pictures, and the more nearly one reproduces the picture itself the more effective is the message conveyed.

THE FILM AN EFFECTIVE MEDIUM

China is peculiarly a field for the use of the motion-picture film to convey ideas because of the great percentage of illiteracy and because of the large numbers who, living in the different sections, speak different dialects, although they use a common written language. One of the best examples of the practicability of the use of motion pictures in China was supplied by the campaign undertaken in China by the Silk Association of America to educate the Chinese silk producers to an appreciation of the needs of the American silk manufacturers. Had the association sent even the best qualified men into the silk districts of Canton and the Yangtze Valley to explain, through interpreters, the modifications necessary in the production of raw silk in China in order to make it acceptable to the uses of the high-speed machine looms of the United States, their efforts would have been futile. But the association's representatives came to China with a motion-picture film showing how the Japanese silk producers made their silk meet American machine requirements. When the Canton silk producers beheld on the screen, before their eyes, all the processes of raising and feeding live silk worms under the improved methods developed in Japan, they understood in its completeness a message which could not have been conveyed through the medium of the spoken word or the written page. Seeing is believing with the Chinese, and it was not difficult after this exhibition to convince even the most illiterate silk producers among them of the changes necessary in their methods to meet conditions in America which would open up to them enlarged markets with increased profits.

Had the Silk Association of America contented itself with getting out beautifully illustrated pamphlets, setting forth their requirements, even though printed in Chinese, they could never have

aroused the interest nor achieved the results which followed their motion-picture display.

China is in a state of transition. In the modern sense it has no old machinery or equipment to scrap, but it is scrapping now much of its old-fashioned mental and social machinery and is endeavoring to adjust itself to new conditions that have been set up through the influence of western ideas and methods. Thus the people are at a stage to take in from the west those ideas and institutions which may be presented to them in the most favorable light. They are not yet able to discriminate in every case, but they are receptive; and once they have become convinced that an idea or an article meets a certain want or fulfills a certain condition they will not be easily swerved to the acceptance of something else. Thus it is important at this time, when these people are laying the foundations of a new order, that American materials and American methods should be presented to them in the simplest fashion and in the most favorable light. In accomplishing this it would hardly be possible to develop a surer and more direct method than the use of the motion-picture film.

METHOD OF PRESENTING SUBJECT

In the production of industrial or educational films for use in China great care must be exercised to present the subject in a manner understandable to the Chinese. The Chinese environment is non-technical and nonscientific. The films should present a comprehensive story as simply as possible, and under ordinary circumstances details of technique should be avoided. The important general phases of a subject should be accentuated.

The Chinese, like other people, are much impressed by those institutions which they do not have themselves. For example, American industrial and business organization is of great interest to them. One of the great assets in connection with American industry is quantity production. When possible to do so, industrial films for Chinese consumption should feature something of the size, method of organization, and number of laborers employed, as well as to exhibit the methods and results of mass output in the industry under display. However, a film showing merely heterogeneous factory buildings bunched together, devoid of the human element, means little to the Chinese audience. Groups of factory or office buildings for motion-picture display should not be filmed on Sundays or holidays, when there are no signs of human activity about. When there are railway facilities connected with the plant the picture should show activity in loading and unloading cars, thereby impressing the audience with the amount of shipping required.

Machinery should be shown in operation and at a time when the laborers are working at full capacity. Nor is it sufficient to exhibit merely the process of manufacturing. A film showing dye works, for example, should also feature in an attractive and impressive manner the uses to which the dyes are put.

In exhibiting road-making machinery a picture of the completed road is not enough. What is a road unless it serves the community? Chinese audiences want to see the movement of traffic up and down the road, its character, and the people that use it. There is much

interest in China now in the construction of good roads, and the people are inquisitive as to how such roads can best be used to serve the needs of economic transportation.

HUMAN INTEREST

The Chinese, in the long course of their civilization and devotion to the family, have become very gregarious. They have developed a keen sense of humor, and human-interest features always appeal to them—but not necessarily in the same way as they appeal to people in America who are brought up in a different environment. The usual American photoplay exhibited in China probably does more harm than good, because in accentuating certain phases of our social life it misrepresents to the Chinese mind American social customs. One of our manufacturers of electrical equipment made an effort to inject the human-interest feature into a picture of a modern American home equipped with electrical devices. In order to emphasize appreciation of these electrical conveniences, as utilized in the home of a newly wed couple, the newly weds were made to express their delight with the contrivances by embracing and kissing each other. This demonstration was repeated so often that to the Chinese audience, unfamiliar with American social customs, it appeared to be a normal American custom.

However, it is very desirable to incorporate in the industrial film something of the human-interest quality. The animated cartoon is one of the best means of introducing humor into a film of this kind for presentation to a Chinese audience. A firm of American manufacturers of agricultural machinery, in its film entitled "The Power Farm," illustrates by means of a cartoon the advantages of the tractor for plowing. A man is shown dripping with perspiration in walking from Omaha to Chicago—the same distance he would cover were he to plow 60 acres the old-fashioned way, but which he can plow with a tractor in one day. This cartoon made a hit, as it contained both essentials, humor and fact; but it would have been even more effective to the Chinese audience had the cartoon represented a Chinese walking from Peking to Hankow.

EXPLANATORY MATTER

It is very necessary in the production of an industrial film to incorporate such visual explanatory matter by way of graphs, cartoons, or otherwise as will impress the essential facts upon the audience in a pleasant and yet permanent way. Naturally it would be more effective in the utilization of material for cartoons if Chinese personages or things familiar to Chinese audiences could be utilized. In one of the films of the Silk Association of America a Chinese delegation of silk men visiting the United States is shown. Naturally this arouses very considerable interest on the part of Chinese audiences. The introduction of a bit of local color into a film is always helpful.

Industrial and educational films for use in China should have descriptive matter in Chinese as well as in English, but this must be done carefully by translators thoroughly competent to handle the special subjects involved. There may be among the Chinese students

in America certain ones who would be competent for certain work of this character, but translations should be carefully checked by independent sources to avoid committing blunders which might tend to ridicule the subject. Similarly, in displaying these films in China, whenever possible to do so, arrangements should be made to have competent Chinese, properly coached in advance, explain to the audiences the significance of pertinent phases which the film is presumed to emphasize.

EXHIBITION AND DISTRIBUTION OF FILMS

Care should be exercised in the use of films in China not to cheapen their value through indiscriminate display to promiscuous audiences. Success in the use of a film does not always depend upon the number of persons before whom it is exhibited. It is far better to reserve the films for display before selected audiences, unless it happens to concern a product which might commend itself to the large consuming masses. Even then, better results would undoubtedly be obtained with especially selected audiences than otherwise. Fortunately the Chinese business man, the Chinese official, and the educated classes generally in China are keenly interested in industrial and educational films, so that one experiences very little difficulty in securing select audiences of good character.

The initial cost in producing a film is considerable. By the addition of a few hundred dollars in this initial outlay the character of the film may be improved several fold in its effectiveness for the objects in view.

As for the agencies through which the American industrial and educational films may be advantageously distributed and exhibited, the American manufacturer may depend upon the offices of the American commercial attaché at Peking, Shanghai, and Canton and upon American consulates in important commercial centers of China for assistance in arranging to secure audiences for exhibitions under most favorable circumstances. This includes the use of the films by American and Chinese chambers of commerce and such other organizations as guilds, bankers' associations, and educational institutions for exhibits and demonstrations effectively put on.

BRINGING AMERICA TO CHINA

One of the very helpful effects of the use of well-worked-out American industrial and educational films during this period of transition in China is the general popularization of things American. It is not to be expected that many Chinese will be able to visit the United States and there inspect American institutions at first hand; but in a sense America can be brought to China through the motion-picture film, so that men of influence and position may come to know American civilization in its more favorable aspects and may appreciate those things which have made for the economic and industrial development of the United States and which in turn may be of service to the people of China in developing their resources. Fortunately America and China are physically very similar. In territory the countries are about the same extent. China has its Yangtze Valley, which is comparable to our Mississippi Valley.

China's agricultural problems are similar to those of America. In transportation problems the similarity between the two countries is very marked. Thus there is probably no other country which has so much to offer of a helpful nature to the development of this great oriental Republic as has the United States.

Through the educational motion-picture film more can be done to present America to China than through any other means, but it must be done with material thoughtfully worked out and well adapted to meet the situation and conditions as they exist in China, with the incorporation of as much local atmosphere as is possible to fit the film to Chinese environment. Whatever one American manufacturer does to assist in this work will redound to the advantage of others, so that in its larger aspects the industrial film serves to further all American trade. This therefore is a subject which should commend itself to manufacturers' associations, foreign-trade organizations, and those interests generally which would work for the extension of American trade abroad.

CHINA'S EXPORT PRODUCTS

By Commercial Attaché Julian Arnold

An American steel manufacturer's representative at Shanghai made the statement a few years ago that the more China developed its native resources in iron and steel the greater the market possibilities for American steel products. The industrial developments which would follow in the wake of the building of modern iron and steel plants in China would, he thought, offer to the markets in the outside world more than China itself could supply. During the past two decades China has installed several scores of modern flour mills, but its imports of flour and wheat for the past two years were the greatest in the history of its foreign trade. While the high prices for rice and the poor wheat crops in centers accessible to the flour mills contributed to this factor, yet increased consumption of wheat products following milling developments contributed greatly.

The purchasing power of the great masses in China is so low that any improvement in economic conditions is immediately reflected in an increase of wealth and a rise in the purchasing power, hence in the per capita consumption. Had American tobacco interests 25 years ago accepted the assumption that as China was a large producer of tobacco the Chinese people would continue to rely upon domestic production to supply their needs for pipe consumption, China would not to-day be their second-best customer for leaf tobacco, and by far their best customer for cigarettes. That the Chinese had been trained for centuries to appreciate the use of tobacco was sufficient to stir the enterprise of tobacco merchants in the United States. With American salesmanship and American initiative it became possible to convert a tobacco producing and exporting nation into one of the leading importers and consumers of American tobacco products.

In its finality all trade resolves itself into barter. This is as true of international trade as it is of domestic trade. The more China sells the more China can buy. In other words, China must pay in goods or services for what it buys. The more the American manufacturer can encourage China's exports the greater are China's importing potentialities.

China is a great storehouse of certain raw materials which are essential to industries elsewhere. For instance, silk manufacture in the United States has developed to such a degree as to represent in the aggregate nearly a billion dollars in capital investment. It depends for much of its prosperity upon raw material from the Far East. The Silk Association of America, in appreciation of this fact, is lending its efforts to the encouragement of China as a larger and more economic source of supply. In response, China now sells to the American silk mills about \$70,000,000 worth of raw silk each year. Thus, through this raw material, American labor, capital, and

machinery find lucrative employment, and American brains and initiative market a manufactured product which adds substantially to the aggregate of domestic trade. It is not economically possible to produce raw silk in the United States.

The American paint and varnish manufacturers have found in Chinese wood oil a product superior in drying qualities to linseed oil. It has become indispensable to the success of the industry. American blanket manufacturers find Chinese cotton peculiarly adapted to their industry, just as the tire manufacturers find Egyptian cotton peculiarly fitted for automobile tires. At the same time, China, through the sales of cotton to the United States, finds it possible to buy the longer staple American cotton for its finer count yarns. In like manner the more of China's vegetable oils the United States takes the more kerosene China buys from the United States.

In order that American trade may benefit to the fullest extent through its purchase of Chinese products it is necessary that as many intermediary agencies as possible be eliminated. It is not yet practical for the United States manufacturer or importer to purchase direct from the Chinese producer, nor are there facilities whereby he may purchase through Chinese agencies, except in a very limited way. Thus China's export trade is, for the most part, in the hands of non-Chinese organizations located in China. Because native industry in China lacks organization in the modern sense of the word, it is necessary to maintain foreign organizations in the country to attend to the details of the export trade in order to insure standardization in quality, in weights and measures, in materials, and in packing and shipping methods. If his business is of such proportions as to warrant it, the American manufacturer or importer should have his own representative or his own organization in China to facilitate the handling of his business in such a way as to derive from it the greatest possible profits. If the business is not of such proportions he would do well, under ordinary circumstances, to make his connections with American exporting firms or with firms not unfriendly toward the utilization of American ships, American insurance companies, and other American facilities in the handling of America's trade with China.

HANDLING BILLS OF EXCHANGE

In price consideration the most important item to the American buyer of Chinese products is silver exchange. For instance, 1,000 taels for a bale of Shanghai silk may be considered a reasonable price in China. If the exchange rate of the tael equals 80 cents gold, it would cost the American buyer in Shanghai \$800 gold. If, in the fluctuations of exchange, the rate should change to 95, the American buyer would be obliged to pay \$950 a bale for his silk, while the Chinese seller would get no more for his product. Hence cheap silver favors China's export trade, and vice versa.

This subject is treated as follows by Mr. Lynn W. Meekins, formerly American trade commissioner to China:

"These are the points that business men in the United States need to be told," said a prominent American exporter in Shanghai:

"First, once an exchange contract is made it can not be canceled and no margin is allowed; neither can any options on exchange be had, and rates

are often subject to violent fluctuations. Therefore it is difficult for Shanghai firms to quote prices to importers in the United States on a gold-dollar basis. Many risks are involved besides the market for the produce itself.

"Secondly, the difference in exchange rates between confirmed credits and documentary credits partly offsets the cost (from one-half to 1 per cent) of confirmed credits in the United States. Firms in China generally finance their exports by means of confirmed irrevocable letters of credit, under which the shipper is fully protected. A better rate of exchange can be secured in Shanghai on a confirmed credit than on a documentary credit.

"Thirdly, it is essential to employ great care in supplying correct particulars to the bank in the United States at which the credit is opened. For instance, it should be distinctly stated whether shipment is to be made via the Pacific coast, via Panama, or via Suez. If one route is specified and the goods are forwarded by another route, the shipper can not negotiate his documents. Nor can he do so if the importer specifies a health certificate for products for which such a certificate is not customarily issued."

FINANCING THROUGH CONFIRMED CREDITS

Most of the exports from China to the United States are now financed by means of irrevocable confirmed credits. Some shipments are forwarded under documentary credits, but these are said to be used very little except by some large firms. After the exporter has concluded the sale of his merchandise to the importer in the United States, he settles exchange with the bank offering the best rate for his bills, the contract usually being for delivery from one to two months forward, depending upon the time of shipment. Then the merchandise is purchased from native dealers, and if it originates in the interior it is shipped to a treaty port and delivered to the exporter's godown or warehouse, where it is re-sorted and packed for export shipment. The exporter now arranges for a packing credit which provides him with funds to finance the shipment up to the time it is placed on board the vessel. This credit is negotiated usually through the bank with which the exporter has contracted for the sale of his bills of exchange. The packing credit constitutes a lien in favor of the bank and customarily covers about 80 per cent of the value of the goods.

The most common usance on export credits is 90 days, although in some cases it is 30, 60, or 120 days, and frequently export cargo is financed by sight drafts. The last-named method gives the exporter the benefit of the difference between the demand rate and a rate covering interest for a specified period.

If a firm in Boston wishes to import a quantity of hides from China, it opens a credit through a Boston bank. After the credit has been arranged in the United States, banks in Shanghai, Hankow, or Tientsin, whence hides are usually exported, will negotiate bills of exchange under this credit. The exporter draws against it in gold dollars. Owing to the growing number of American banks in China, the market for bills drawn in dollars on New York is increasing. If the shipment were going to Great Britain, the bill of exchange would be drawn in sterling. In the case of exports from China to Scandinavian countries, and sometimes those to France and the Netherlands, bills are also drawn in sterling. On the other hand, shipments from China to South America are ordinarily financed by bills drawn in gold dollars, occasionally in pounds sterling.

The usual method of opening a confirmed credit is for the importer in the United States to arrange the matter through his local bank. He fills out an application blank stating the name and address of the China exporter, the total amount involved, the description of the merchandise to be imported, and the usual agreement to effect marine and other insurance. It should be noted, however, that either the exporter in China or the importer in the United States may arrange for the insurance. Each bill drawn under a letter of credit is accompanied by the following shipping documents: Consular invoice, invoice, bill of lading, and insurance policy. Instructions concerning these documents and where they are to be sent are always contained in the credit.

BASIS OF NEGOTIATIONS

Exchange rates are quoted in Shanghai in a daily bulletin issued by the Shanghai Exchange Brokers' Association, which contains the rates on London,

India, France, America, Hongkong, Japan, Batavia, and the Straits Settlements. These are the opening rates of the Hongkong and Shanghai Banking Corporation, but actual business is often negotiated at several points higher or lower, depending upon market conditions. Some banks may be short of cash and offer less attractive rates than others. The basis of the rates is the price of bar silver in London, and also the exchange rates between London and the principal commercial centers of the other countries involved—in the case of the United States this would be New York.

DOMICILE OF BILLS

The domicile of bills drawn on the United States depends upon the city in which the importer of the goods is located. The most customary domiciles of China bills of exchange are New York, Chicago, San Francisco, Philadelphia, and Boston.

During the past year there has been material improvement in the frequency of mails between China and the United States, and at present there is a mail at least fortnightly and often weekly. From Shanghai to Seattle the mail time is 16 days; to San Francisco, 22 from the sailing date of the steamer from Shanghai. According to a ruling of the Shanghai Bankers' Association, the exporter formerly was only given credit for the proceeds of his bills the day before the mail closed, but recent practice is to give him credit at once for his bills. Therefore the securing of quick returns depends upon the frequency of the mails.

EXCHANGE QUOTATIONS

New York rates of discount and exchange are regularly and accurately quoted in Shanghai by all active foreign-exchange banks.

Shanghai banks receive daily cables from New York, London, and other commercial centers giving them exchange quotations in the principal markets of the world. It is always possible to obtain quotations in Shanghai for bills on New York.

Among the tables of exchange rates published in China are the Far Eastern Exchange Tables, compiled by F. X. Sequeira, and published by the Commercial Press, Shanghai. The Chinese-American Publishing Co., and Kelly & Walsh, both located in Shanghai, have also published standard exchange tables, which are in wide use.

All the Shanghai foreign-exchange banks receive discount quotations daily from New York, London, and other centers. Forward rates of New York discounts are regularly quoted by the majority of the foreign banks in Shanghai.

The margin of profit calculated in the purchase of first-class commercial bills varies, depending upon the demand for such bills and whether or not money in China ports is easy. When money is tight banks will not tie up their funds in bills unless the rates are very attractive. The reverse obtains when money is easy. The discount rate on New York, London, and other centers is the basis for the purchase of these bills, modified, of course, by the local conditions affecting the market at the time of negotiation. Exchange banks in China usually discriminate in favor of bills of exchange on Great Britain and the United States.

MINERAL PRODUCTS

According to the findings of the Geological Survey of China, coal ranks first among China's mineral resources, the contents of its coal beds being estimated at 40,000,000,000 to 50,000,000,000 tons. The iron-ore deposits appear to be much less than has been generally supposed, probably aggregating not more than 1,000,000,000 tons. Internal disturbances have seriously affected the iron-ore output, although the prime unfavorable factor has been the high rail transportation rates on coke for the manufacture of pig iron, which now costs more to produce in China than in the United States. Considering the reduced values which followed postwar deflations, the present production of iron can not be regarded as on an economic basis.

China has larger deposits of antimony than has any other nation. Antimony production rose to abnormal heights during the war. From the standpoint of world production figures, China's most important metals are antimony, tungsten, and tin, in the order given; but from a more restricted standpoint, tin may be regarded the most important of the three. Tin, which comes from southwestern China, is the only metal which continues to expand in China's exports, the exports for 1923 amounting to about 9,000 short tons.

With the conclusion of the war tungsten and manganese production dropped heavily. Mercury production has also fallen. Unfavorable conditions in Hunan have prevented any considerable development in the lead and zinc industries. Apparently China has almost exhausted its known resources in silver and copper, although there are considerable copper deposits in Mongolia and Sinkiang, where silver also may exist. In North Manchuria and in Mongolia are gold deposits which, because of unfavorable internal conditions, are not being worked. As a whole, China's mineral progress in recent years has been most largely in the mining of coal.

The matter of foreign participation in the development of China's mineral resources remains one of much interest to Americans. According to the mining laws enacted in 1914, mining rights are reserved to Chinese citizens and to citizens of treaty-power nations when doing joint business with Chinese, but under the provision that foreigners shall not hold more than half the total number of shares in the mining concern. These laws have never been acceptable to foreign interests. Under the present disorganized conditions of government in China, however, they serve helpfully in preventing mining properties from falling into the hands of undesirable interests. Through negotiations, first with the provisional authorities and later with the Ministry of Agriculture and Commerce, agreements acceptable to foreign interests have been made with regard to mining operations. These negotiations assure sufficient control for the protection of the invested foreign capital. Foreigners also make loans to mines under an agreement whereby the principal and interest are repaid in deliveries of ore on contract. However, care must be exercised in regard to the security offered by native mine owners.

For detailed information regarding China's mineral resources, reference is made to the publications of the Geological Survey of China, a list of which, with prices, may be secured from the office of the Geological Survey in Peking. Rea's Far Eastern Manual, published by the Far Eastern Review, gives very full data regarding industrial mining companies operating in China. For mining agreements, interested persons are advised to consult MacMurray's Treaties and Agreements with China.

ALUM

China produces a high quality of alum. The principal center of production for the export trade is Chekiang Province, with Wenchow as the port of export. During 1923 there were exported from China 12,000 short tons. American imports of alum were inconsiderable, with no record of exports. Thus the article is not one of interest to the American trade.

ANTIMONY

China dominates the antimony situation by its large and cheaply mined deposits. Antimony is used principally as a hardening agent for lead. During the war it found an extensive use in shrapnel bullets. It is an important component of type metal and in metals used for bearings. The great bulk of China's antimony comes from Hunan Province, which possesses the purest ores, practically free from arsenic and carrying from 20 to 64 per cent of antimony. Smelting is done at Changsha and Hankow. The United States is the principal purchaser of China's antimony. During 1923 China exported 13,000 short tons of antimony regulus, 3,200 tons of crude antimony, and 2,300 tons of antimony ore. China contributes probably 60 per cent of the world's output of antimony.

ARSENIC

Arsenic bisulphide and arsenic pyrites in combination with tin are found in Hunan, and arsenic in the form of orpiment occurs in the northwestern part of Yunnan. The exports for the last 10 years of white arsenic from Changsha, Hunan, averaged about 200 tons per annum. A very complete report on the arsenic industry in Hunan was made by Vice Consul Atcheson in August, 1923. [A copy of this report is on file in the Chemical Division, Bureau of Foreign and Domestic Commerce.] The exports of arsenical compounds from Hankow for the year 1923 were about 700 short tons.

ASBESTOS

Asbestos is found in various sections of North China. It does not appear to be of high tensile strength. It is probably correct to say that the deposits of asbestos in China have not been sufficiently investigated to ascertain definitely whether or not the chrysotile or serpentine asbestos abounds in sufficient quantities to make possible the development of an industry. At present very little is used for manufacturing, and it does not figure as an article of export. America's imports of this commodity are for the most part from Canada.

COAL

The Geological Survey of China makes a preliminary estimate of China's coal reserves at a depth of 1,000 meters, and for seams of a thickness of more than 1 meter of 6,000,000,000 tons for anthracite and 17,000,000,000 tons for bituminous and lignite coals. Allowing for greater depths and narrower seams, the probable reserves are from 40,000,000,000 to 50,000,000,000 tons. This amount, if calculated on the basis of the American consumption of 500,000,000 tons a year, would last from 80 to 100 years only. China's present consumption may be estimated at 20,000,000 to 25,000,000 tons annually. With the exception of Russia and America, China is the only country bordering on the Pacific possessed of considerable coal resources. It is interesting to note that while the proportion of anthracite to bituminous coal in the world's coal reserves is 1 to 8, in China the pro-

portion is 1 to 3. The estimates of China's coal production for 1922 were as follows for mines under modern methods of operation:

Provinces	Bituminous	Anthracite
	<i>Tons</i> ¹	<i>Tons</i> ¹
Manchuria.....	4,000,000	-----
Chihli.....	4,500,000	900,000
Shansi.....	150,000	250,000
Shantung.....	2,000,000	-----
Honan.....	250,000	1,000,000
Kiangsi.....	900,000	-----
Kiangsu.....	200,000	-----
Other.....	200,000	50,000
Total.....	12,200,000	2,200,000

¹ Long tons.

Estimates for the annual output of native small mines, bituminous and anthracite, amount to 6,000,000 tons, making the grand total approximately 20,000,000 tons.

It is estimated that about 50 per cent of the coal production of China is from companies financed and operated jointly by Chinese and foreign interests, the principal foreign interests being British and Japanese. The latter control the coal companies in Manchuria and have extensive shares in those of Shantung, while the British control properties in North and Central China. The Chinese Engineering & Mining Co. represents the largest coal-mining properties in China under British operation. The output of the Kailan Mining Administration, which is the Chinese company, is about 4,000,000 tons a year. Its dividends during the past 10 years have ranged from 10 to 30 per cent. Recently the British company has acquired an interest in the Peking syndicate, these two concerns now controlling about one-third of the coal produced in China by modern methods.

During 1923 China exported 3,000,000 tons of coal, the bulk of which went to Japan. During the same year China's imports netted 1,350,000 tons. Figuring exchange at \$1 silver equal to \$0.50 gold, Shantung bituminous coal, of a quality comparing favorably with that used on the west coast of the United States, with ocean freight at \$4 a ton, should cost \$8.50 gold, alongside dock in San Francisco.

Probably the greatest impediment to the development of China's coal resources has been the lack of economic transportation, more particularly railway transportation. With improved means of communication in the interior, economically administered, the potentialities of China's coal resources are very considerable.

For further information regarding China's coal deposits, see publications of the Geological Survey of China, a list of which may be secured by addressing the Geological Survey, Peking. For detailed descriptions of the various Chinese coal-mining companies, consult Rea's Far Eastern Manual, the Industrial Year Book of the Far East.

COPPER

Before 1911 copper was a Government monopoly and no private mines were allowed to exist. Since the revolution the largest copper-

producing district in China at Tungchwan in Yunnan became a private company, with the annual production varying between 700 and 800 tons. The Penghsien of Szechwan are the property of the provincial government. The mines have a semimodern smelting plant, though they produce less than 200 tons per annum. In Kirin, in northern Manchuria, there is also a provincial copper mine producing a similar amount. On the whole, however, it may be said that China's actual copper production is negligible. A Russian authority makes the statement regarding copper in Mongolia, "So far five deposits have been investigated and surveyed. * * * The largest deposit as to area and the stock of the metal is the deposit in the Aimak Sainhain, where the seam of copper stretches over 35 kilometers and where often big pieces of native ore are found weighing 1 pound."

As China is on a copper rather than a silver basis, so far as the currency of the masses is concerned, and as there are probably 60,000,000,000 copper coins in circulation, copper is an important item in China's trade. During the three years 1921-1923 China's importation of copper ingots and slabs aggregated 90,000 short tons, of which nearly two-thirds were from the United States.

GYPSUM

Gypsum is widely found in China, Hupeh holding the largest output, with Hunan second in importance. In Hupeh the gypsum is interstratified in the sandstone and green shale. China's exports of gypsum average about 8,000 short tons a year. During 1922 the United States produced about 4,000,000 short tons, as the largest domestic production in the world. The deposits are close to the surface and are mined very cheaply.

IRON

Gradually, through the labors of the Geological Survey of China, information is being obtained regarding China's resources in iron ore. In two volumes with illustrations and charts the survey gives under date of 1921-1924 an excellent presentation of the iron ores and iron industry of China. To quote from page 293 of Part II of this publication:

It is at once evident that some 950,000,000 tons of iron-ore reserves is by no means much for such a large and populous country as China, and even if continued investigations would—which seems rather improbable—in the near future raise these known resources to double the amount the general situation would not be essentially altered. One thing, therefore, is certain, China can no longer be regarded as a storehouse of inexhaustible future reserves of iron ore, to be drawn upon when the supplies of other countries are beginning to give out. On the contrary, her iron-ore resources must be termed very modest or even scant, when her potentialities of industrial development are taken into consideration, and the strictest economy would be indispensable to guard against future unpleasant contingencies. By way of illustration, it may be pointed out that the total quantity of iron ore (both actual and potential) represented by the figures above would be consumed by the iron industry of the United States within less than nine years. And then it has to be noted that the bulk of these resources consist of the low-grade Manchurian ores, the exploitability of which is still somewhat problematical, or which at any rate are far below the average standard.

But, unfortunately, a comparison with the conditions of the United States is by no means justified. As will be stated in a later chapter, the present rate

of consumption in China is still so immensely low that the resources expressed above in figures would suffice to cover the demands for many centuries. Even if the low-grade Manchurian ores are excluded the remaining high-grade ore would still be enough for the domestic requirements for about 200 years, according to the present rate of consumption, and perhaps a century if a moderate progressive increase is assumed. Since there seems to be no reason to suppose any exceptionally rapid development of the demand for iron in China, it may be concluded that the country's resources in iron ore must be considered sufficient to assure a moderate growth of its iron industry in the near future.

Since 1896 it appears that 50 per cent of China's aggregate production of 11,200,000 tons of iron ore, as mined by modern methods, has gone to Japan. In addition, a considerable quantity of China's pig iron has been taken by Japanese steel plants. The estimate of the approximate annual output of the native iron industry, not using modern methods, as made in 1916 by the Ministry of Agriculture and Commerce was 500,000 tons of ore and 170,000 tons of pig iron.

Under present conditions the cost of production of pig iron is higher in China than in Europe, the United States, and India, or even higher than the Pittsburgh market quotation (April, 1924) of \$22 gold. The costs of iron ore and direct labor are considerably less in China than in western countries, but the cost of coke and the expenses of manufacturing, including overland transportation, are higher. Chihli, Shengking (Fengtien), and Shansi, in the north, and Kiangsi, in the south, are the only Provinces capable of supplying large quantities of coal suitable for metallurgical purposes.

Thus the main factor is the high cost of coke at the smelters, due to high rail costs. This is particularly true of the Hanyang Iron Works.

Conditions in North China are more favorable. In fact, with the erection of steel fabricating plants to use the pig iron which can be manufactured in North China at costs comparable with those in the United States the iron and steel industry could be made an economic success.

In recent years the annual production of pig iron has not exceeded 300,000 tons, of which two-thirds have been exported, mostly to Japan. Thus China's domestic consumption is estimated at 170,000 tons of pig iron from native furnaces, plus 350,000 tons of imported various iron or steel manufactures, or about 500,000 tons in all. This gives China a per capita consumption equal to one one-hundred and eightieth of that of the United States; one one-hundredth of that of England or Germany; one-tenth of that of Japan; one-thirtieth of that of the average for the world. Probably nothing else so well illustrates China's backwardness in a modern industrial sense as do these figures. With the breaking down of primitive agricultural and handicraft industry, great strides may be expected in increased iron and steel production and consumption in China.

KAOLIN

Kaolin is largely used in the manufacture of white earthenware and chinaware and of high-grade tile, and as a filler in manufacturing paper, paint, rubber, and oilcloth. It forms 20 to 30 per cent of the body of chinaware. The domestic deposits in the United States are extensive, but generally regarded as inferior; hence the

imports are quite considerable. Over 50 per cent of imports of kaolin into the United States come from England.

It would seem that kaolin from China might find market opportunities in the United States. Some of the deposits are regarded as of high quality. South China is favored with a wide distribution of the types of rock formation from which kaolin is derived. The most valuable deposits are said to be those at Kingtehchen, Kiangsi Province, of which Kiukiang is the port of shipment.

LEAD AND ZINC

According to the report of the Geological Survey, the only two mines producing these metals in China are the Skuikoushan mine in Hunan Province, which is controlled by the provincial government, and the Kunshan mine of the Tunghwan Mining Co. in Yunnan. In the former the average zinc concentrate contains about 42 per cent of zinc and the lead about 65 per cent of lead with 10 ounces of silver. In Yunnan the ore is mostly carbonates, but sulphites also occur with a silver content of 16 to 20 ounces per ton. Owing to the unfavorable political conditions obtaining in the interior of China, combined with the fall in market prices of these metals since the conclusion of the war, these mines are not working up to capacity. The exports of zinc ore for 1923 were about 70,000 short tons, the bulk of which went to Belgium. The exports of lead ore for 1923 were about 5,000 short tons, Germany and Belgium taking practically all.

MAGNESITE AND TALC

According to the Geological Survey, in 1915 magnesite was found to occur together with talc in the vicinity of Mukden. It is found also in the Wutsi Series.

MERCURY

Kweichow is the center of mercury production in China. It is also produced in Hunan, Szechwan, and Kwangsi Provinces. Native methods are used in mining and in metallurgy. The mercury content, however, is seldom more than 5 per cent. China's exports fell from 100 tons in 1921 to 2 tons in 1923.

PETROLEUM

The Geological Survey of China, 1921, places China's resources of petroleum next after iron and coal. In Yenchang, Shensi Province, Government wells have been producing oil steadily for a number of years. In Szechwan oil is known to occur in the salt wells. The amount produced, however, is small. Probably the wells were drilled principally for mining salt, and the driller often may have passed the oil stratum without oil being noticed; hence, the amount obtained does not represent the actual resources. It is the opinion of the Geological Survey that Szechwan is likely to prove rich in petroleum. It is also their opinion that the prospecting done in 1916 by American interests in Shensi, where two oil wells were drilled, each less than 3,000 feet, did not produce conclusive results. Mongolia, also, it is believed, is rich in petroleum. However, it will be neces-

sary to do more prospecting before the full extent of China's petroleum resources can be definitely known.

SALTPETER

According to C. E. Kao, of the Chinese Institute of Mines and Metals, saltpeter is widely distributed in China, especially in the eastern area, where mountains are few. Most of it occurs in potassium nitrate. By ancient custom saltpeter may be manufactured only under Government license. The local officials have given to certain families for many generations the right to manufacture saltpeter. The production varies considerably at different places. It is a by-product of labor, and the people have not yet come to appreciate its importance as a salt for agriculture and other purposes; therefore the production exceeds the local demand. In North China saltpeter deposits are reported by a Russian authority to be of exceptional value, ranking in quality with the best deposits in Chile. In Kansu Province the deposits are said to be 300 kilometers long from east to west, lying under a seam of gypsum which in some places changes into anhydrite. This same report mentions the proximity of water, which will greatly facilitate the working of these deposits.

SILVER

It appears that China has always been poor in silver resources. The country has been on a silver rather than on a gold basis; hence, silver is an important medium of exchange. As with copper, it forms the metallic currency of the country. During the past 10 years the imports of silver were in the aggregate about 400,000,000 haikwan taels (approximately \$300,000,000 gold) in excess of exports.

SODA

Soda, consisting of a mixture of sodium carbonate and bicarbonate, is found in the salt lakes in Mongolia. The company working the deposits produces 1,200 tons per year. China's exports for 1923 amounted to about 1,000 short tons. With better methods of extraction and improved means of communication, it is expected that the production in China will very materially increase.

SULPHUR AND PHOSPHATE

The Geological Survey states that no big deposit of natural sulphur has yet been discovered in China, but the chances of discovery are fairly good in regions where sulphides occur. Phosphate is known in the Pratus Island (not far from Hongkong), which is a Chinese possession. The resources of these two products of importance to industry and agriculture are still problematical, so far as any considerable quantities are concerned.

TIN

Tin represents one of the few metals not found in the United States in commercial quantities. Bolivia is the chief source of supply for the American smelters. During 1922 the United States

produced about 1,400,000 long tons of tin plate, being the largest producer in the world, with England second.

Definite data as to China's tin production are difficult to obtain. It probably runs between 8,000 and 10,000 long tons annually. Malaya produces 35,000 to 40,000 tons; Bolivia, 25,000 to 30,000 tons; and Banca (Dutch East Indies), 12,000 to 13,000 tons. Thus China ranks fourth. The bulk of China's tin is produced in Yunnan Province in the Kochiu district. The mines are worked by native methods, and there is but one smelting plant. China's average annual exports of tin slab, based upon the six years 1918-1923, are equivalent to 8,500 long tons. The bulk of tin exports go from Yunnan to Hongkong, from which port they are transhipped to other sections of the world. During 1922 the United States took 6,500 long tons from Hongkong, valued at \$4,500,000 gold. The figures for 1923 were 4,000 tons, valued at \$3,000,000 gold. The decrease in the main was due to disordered conditions in Yunnan. The fact remains, however, that the United States is China's heaviest purchaser of tin, taking about two-thirds of its exports.

TUNGSTEN, MOLYBDENUM, AND MANGANESE

Of all the tungsten ore now produced, 90 to 95 per cent goes into the manufacture of tungsten powder and ferrotungsten, which is used in the manufacture of high-speed tool steels. The addition of tungsten to steel gives it the property of retaining its temper at a much greater heat than that at which simple carbon steels and most other alloy metals crumble. Tungsten was discovered in China as late as 1915. The country has now become the second largest producer in the world. The production of tungsten ore in the United States in 1917 reached 6,000 short tons, but by 1920 it had dropped to 200 tons, and by 1922 production had ceased. There is no doubt but that China will be a continued important source for tungsten. At present most of it comes from the three Provinces of Hunan, Kiangsi, and Kwangtung.

Molybdenum, which has somewhat similar properties to tungsten, is generally used in conjunction with tungsten, which it replaces only in part. Molybdenum has been discovered in Fukien, Chekiang, and Kwangtung, but it has apparently not yet become an object of commerce.

According to the Geological Survey, manganese is found principally in Hunan, Kwangtung, and Kwangsi. During the war the exports of manganese were very considerable, but subsequent low prices have resulted in the closing of many of the mines. However, during 1923 about 60,000 short tons of manganese ore were exported, mostly to Japan.

ANIMAL PRODUCTS

The Chinese, generally speaking, use no dairy products, nor do they eat beef. The very extensive use of animals for farm work in the south and for both farm work and transportation in the north is in interesting contrast with developments in the United States. Absence of manufacturing industries for utilizing animal by-products is conspicuous. China's very large exportation of egg products indicates a domestic consumption proportionately far less than that of

the United States. On the other hand, the Chinese consume proportionately more fish and other marine products than are consumed by the people of the United States. Fishery products have not been included in the list given hereafter, as they do not figure in China's exports, nor do the by-products interest foreign markets. Such products are of interest to those nations with a surplus for export rather than to those who would look upon China as a source of supply.

BRISTLES

Bristles of the quality required in brush making are not produced in the United States. The best qualities come from the cold regions of the Temperate Zones; hence Russian bristles, chiefly from Siberia, are considered the best. Siberian bristles are handled through a monopoly held by a Soviet Russian official organization and a Russian central cooperative organization.

Bristles from China are used in the United States mainly for paint brushes. During 1923 China exported about 70,000,000 pounds of bristles valued at \$6,200,000 United States gold. These figures are 10 per cent higher than those for 1922 and about 70 per cent above the exports for 1921. Of the 1923 exports the Chinese customs returns credit the United States with taking 48 per cent, Great Britain 34, Japan 9, France 4, and Hongkong 2 per cent. Exports of bristles to the United States for 1923, as declared at Chinese ports, indicated a gold value of \$5,548,000 and from Hongkong \$107,000. The total imports of bristles into the United States for 1923 from all countries were valued at \$10,000,000.

Of Chinese bristles, Tientsin exports between 40 and 50 per cent and Hankow and Chungking each between 15 and 20 per cent. Manchurian bristles, exported from Dairen, Newchwang, and Tientsin are of particularly good quality. The average hog in North China produces one-half pound of spinal bristles and one-fourth pound of side bristles.

China's bristle trade has increased because of the inability of the American and European buyers to secure the Russian product. In response to the increased demands in China, prices have advanced very materially, although certain local factors have been in part responsible for higher prices. Some of the larger firms dealing in bristles have their purchasing agents in the interior towns, where bristles may be advantageously collected. Buyers and peddlers also go about through the country making purchases in small lots, often making payments in kind. The bristles are collected in the export centers, where they are assorted in accordance with length, color, and quality, and are tied in bundles, disinfected, and packed according to sizes. The boxes as ready for shipment contain 1 picul (133 $\frac{1}{3}$ pounds) net of bristles.

The United States tariff of 1922 prescribes a duty of 7 cents gold a pound for bristles, sorted, bunched, or prepared; and for bristles crude, not sorted, bunched, or prepared, free.

CATTLE

The dairy industry has never been developed in China, as neither butter nor milk are in general use. Bean products seem to give

the Chinese the ingredients of milk, and with the exception of the Mohammedans, who number about 20,000,000, they eat very little beef. Except in Mongolia and certain restricted regions of North China, cattle are raised only for farm animals. The European war did, however, put a high premium on cattle in China, and a very considerable export trade developed, especially from Tsingtao and Tientsin and through Mongolia and northern Manchuria into Siberia. The development of beef eating among the Japanese has created a definite demand for Chinese beef in Japan. It is estimated that about 50,000 beeves a year are exported from Tsingtao to Japan. The Mongolian steppes are splendid cattle country. A Russian authority estimates the number of horned cattle in Mongolia as nearly 2,000,000. The Chinese Eastern Railway estimates the number in the regions tributary to the railway as 5,000,000. In the former figure the yearly increase is estimated at 200,000, and in the latter 350,000. The winter of 1923 in Mongolia was extraordinarily severe and is presumed to have killed off a very considerable number of cattle. Precautions against anthrax and rinderpest are of a primitive nature, hence the death toll from these causes is at times heavy. The Mongols store up no hay or other feed for their cattle for the winter; thus a heavy snow plays havoc with grazing, and lack of shelter results in a prevalence of epidemic pneumonia and similar diseases. The Chinese who migrate to Mongolia following the line of the railway do not take to the cattle industry, which seems to remain with the nomadic Mongols, who recede with their flocks into the steppes as the Chinese advance along the railway.

In South China, that is, below 35° north latitude, the water buffalo is universally used as the farm animal, because of its adaptability to work in the rice fields. Horned cattle (water buffaloes, oxen, and steers) are estimated by one authority at 50,000,000 for the whole of China; 25,000,000 or 30,000,000 is probably a safer estimate. Cow and buffalo hides comprise a very important item of export.

EGGS

It is probably safe to estimate the number of chickens in China as about 600,000,000. The agricultural department of the Canton Christian College credits the Chinese hen with laying, on the average, 72 eggs a year. During the past 20 years eggs have become important items in the export trade of China. In 1923 China exported egg products as follows (value in United States currency):

Egg albumen and yolk (50,000,000 pounds)-----	\$10,000,000
Eggs:	
Fresh and prepared (1,000,000,000)-----	9,000,000
Frozen (50,000,000 pounds)-----	4,500,000
Total value-----	23,500,000

These figures do not differ greatly from the figures for egg exports for the two previous years. In the aggregate, these egg products represent upward of 3,000,000,000 eggs exported annually from China. Forty-five per cent of the albumen and yolk was taken by England, and 37 per cent by the United States. Most of the remainder went to France and Germany. Of fresh and preserved eggs, 75 per cent was taken by Japan; of cold-storage eggs, England took

75 per cent and the United States 20 per cent. The principal ports for the export of egg products are Hankow, Shanghai, Tientsin, Tsingtao, and Nanking.

Under the United States pure-food laws liquid albumen and yolk must be denatured, or rendered unfit for other than industrial purposes; hence imported liquid eggs, liquid yolk, and liquid and dried albumen are in the United States used in the industries. Liquid eggs and liquid yolk are used in tanning leather, and albumen is used in the textile industries for printing cotton cloths which do not take ordinary pigments naturally. Albumen is also used in finishing paper, sensitizing photographic plates, and in thickening ink. Dried whole eggs and yolks are mainly consumed by pie and pastry bakers, in cooking, and by confectioners. The United States tariff act of 1922 shut out Chinese trade in eggs in the shell.

The price of eggs in China varies with the accessibility to economic transportation. In Kansu Province, in West China, away from economic transportation, one may purchase 100 eggs for 15 cents gold. In Peking, 100 eggs will cost 65 cents. In Shanghai and Tsingtao (which are ports accessible to easy transportation from the hinterland, and also for export) the price at the end of 1924 was 100 eggs for \$1.70 to \$1.90 silver, or from 85 to 95 cents gold. The average weight of Chinese eggs is about 10 eggs to the pound.

The egg-products industry in China is now well organized. At Shanghai, Hankow, Tsingtao, Nanking, and Tientsin facilities have been developed under foreign auspices which make possible the handling of eggs in a sanitary way with modern methods for desiccation, drying, and refrigeration. Thus it appears that the industry has become established on a permanent basis.

The United States tariff of 1922 prescribes the following import duties for eggs and egg products:

Egg albumen or yolk:	Cents per pound
Dried-----	18
Frozen or otherwise prepared or preserved, and not specially provided for-----	6
Eggs:	
Dried-----	18
Frozen or otherwise prepared or preserved, and not specially provided for-----	6
Shells removed (liquid)-----	6

FEATHERS

China exports annually about 10,000,000 pounds of feathers, roughly valued at \$1,000,000. Prior to the European war, Germany was the chief purchaser. Within recent years the United States has become China's principal customer, with Great Britain second in importance. The principal feathers exported from China are duck, goose, and chicken. They are graded as duck down; duck feathers, gray and white, cleaned and uncleaned; goose down and goose feathers, the latter cleaned and uncleaned; chicken feathers, cleaned, uncleaned, and hard. The principal ports of export are Shanghai and Hongkong.

GAME

China abounds in wild game, even throughout the densely populated Yangtze regions. Good feed is plentiful in the cultivated

areas, since the land is under cultivation just as long during the year as climatic conditions will permit. Geese come from the north in vast numbers to winter in China. Ducks are most numerous—in fact, China may be said to be the duck-hunter's paradise. The mallard, yellow-nib, sheldrake, several varieties of teal, white-eyed, scaup, tufted, and pintail are among the wild ducks found in China, the teal being probably the most common. The bustard, pheasant, snipe, quail, partridge, grouse, plover, and sage hen are also found in varying abundance. These are in demand by a British cold-storage company that has erected plants in various parts of China and operates a line of refrigerator steamers. Prices, which were ridiculously low before the inauguration of this business, have in some cases and localities advanced four and five fold, though they are still low from an occidental point of view.

Deer are plentiful in China. Wild boars are found in good numbers. Tigers, leopards, foxes, and wolves are found in certain parts of the country, but in decreasing numbers.

HIDES, SKINS, AND FURS

China's exports of hides, skins, and furs for 1923 are shown in the following table, with the values expressed in United States currency, the haikwan tael having been converted at the rate of 1 tael equivalent to 80 cents gold.

Items	Quantity	Value
HIDES AND SKINS		
Undressed:		
Buffalo and cow	pounds.. 39,000,000	\$7,300,000
Goat	pieces.. 7,360,000	4,400,000
Horse, ass, and mule	pounds.. 2,400,000	450,000
Sheep	pieces.. 254,000	190,000
Dressed:		
Goat (tanned)	do.. 1,400,000	1,570,000
Kid	do.. 515,000	100,000
Lamb	do.. 1,030,000	1,040,000
Skins, dressed and made up:		
Goat (mats and rugs)	do.. 125,000	150,000
Lamb (clothing)	do.. 103,000	400,000
Dog (clothing, mats, and rugs)	do.. 340,000	225,000
FURS		
Dressed and undressed:		
Fox	pieces.. 120,000	890,000
Marmot	do.. 2,900,000	1,225,000
Raccoon	do.. 67,000	65,000
Sable	do.. 2,865	135,000
Weasel	do.. 1,050,000	575,000
Unclassed ¹	do.. 3,200,000	1,550,000

¹ Includes cat, rabbit, squirrel, badger, antelope, deer, wolf, etc.

Of the buffalo and cow skins about 50 per cent are exported from Hankow, 15 per cent from Shanghai, and 10 per cent from Tsingtao. Japan took about 30 per cent, the United States 20 per cent, and Italy and Germany about 10 per cent each.

Of the untanned goatskins about 40 per cent were shipped from Chungking, 22 per cent from Hankow, and 20 per cent from Tientsin. The United States took 85 per cent. The bulk of the undressed sheepskins went from Tientsin and Shanghai, and the United States took 70 per cent. Of the tanned and dressed goatskins 80 per cent

were shipped from Tientsin; the United States and Great Britain each took about 40 per cent and Belgium about 12 per cent. Great Britain took 60 per cent of the dressed lambskins and the United States about 40 per cent. The dressed dogskins were nearly all shipped from Tientsin and taken by the United States. Of the made-up lambskins 70 per cent were shipped from Tientsin and 20 per cent from Shanghai. Forty per cent of these were taken by the United States and 35 per cent by Great Britain. Tientsin exported 75 per cent of the foxskin furs, and most of the remainder went from Harbin. Great Britain took 60 per cent and the United States about 35 per cent. Practically all of the marmot skins were exported from Tientsin, the United States taking 40 per cent, Great Britain 35 per cent, and Germany 22 per cent. Sable skins were shipped from Harbin and practically all were taken by the United States. Shanghai and Hankow each shipped about 40 per cent of the weasel skins. The United States took 65 per cent and Great Britain about 30 per cent. Of the unclassified furs, Harbin, Tientsin, and Chungking were the principal ports of export. The United States took about 70 per cent and Great Britain about 25 per cent.

Foreign establishments are maintained in the principal export centers in China for cleaning, grading, and press-packing hides and skins collected from the centers of production. The tanning and leather industries in China have not been much developed. Technical skill and a large amount of organized capital, two essentials to success in these industries, have been lacking. China imports about \$6,000,000 worth of leather annually. In a small way it may be said that the tanning and leather industries are developing, and as time goes on it is more than likely that China will use its raw material for supplying its needs in leather.

LIVESTOCK OTHER THAN CATTLE

In addition to cattle, the other livestock of importance in China are horses, mules, donkeys, camels, sheep, goats, hogs, and poultry. In the absence of any definite or reliable statistical data on any of these subjects, one can treat of them in only a general way.

Horses, mules, donkeys, and camels are used extensively in China north of 35° latitude; that is, throughout those regions where dry-land crops, rather than rice, predominate. In the regions north of 35° there are roads, whereas in the south, in the rice-growing country, there are paths rather than roads. Except for wheelbarrows, one finds comparatively few carts or other wheeled vehicles in use in the Yangtze Valley, or the regions south of the Yangtze River. On the other hand, among the 150,000,000 people of North China wheeled vehicles and pack animals are in common use and account for the employment of enormous quantities of horses, mules, donkeys, oxen, and camels. The camel is the only animal used solely for pack purposes, and its use is restricted to the desert or arid regions. The others are also employed as work animals in the fields. North China is poor in navigable waterways and in railways. Furthermore, motor transportation is only in its beginning. The farmers still use the implements and methods of 2,000 years ago. This combination of circumstances is conducive to an extensive use of the animals mentioned.

From an export viewpoint, horses, mules, donkeys, and camels offer little, but horsehides and the hair of horses and camels are exported in considerable quantity.

Horses.—The Chinese horse is in reality a pony of the American broncho type. It comes from Mongolia, hence is commonly known as the Mongolian pony. The Mongols, like the North American Indians, are a nomadic people, and with them the pony is indispensable.

Mules and donkeys.—The mule and the donkey are used extensively in China as draft and farm animals. In West China, where they are raised particularly for hauling carts, are to be found mules which compare well with the American mule. During the World War China exported considerable numbers of mules.

The donkey is the most common and most extensively used pack animal in China. It is also widely used as a farm animal and for human transportation. To the farmer of North China the donkey is as indispensable as his plow.

Sheep.—Sheep are raised extensively in North China and more particularly in northwestern China—that is, in Mongolia, Kansu, Chinese Turkestan, Sinkiang, Shansi, and Shensi. From estimates made by various authorities it would appear that 40,000,000 sheep for the whole of China is a fair estimate. These figures are equivalent to the number of sheep in the United States. For the most part the sheep of northwestern China, including Mongolia, subsist on grazing. The Mongolian steppes afford excellent grass. Unfortunately, the Mongols do not cut the grass, hence, in winters of unusual snow, such as the winter of 1923–24, the death rate is high. Some estimate that 50 per cent of Mongolia's sheep died of starvation during the winter.

There are several varieties of sheep in China, one of which is very small and produces poor wool. The predominant sheep of northwest China is large, the male standing 30 to 32 inches and weighing 70 to 100 pounds, with a big, broad tail which weighs as much as 8 pounds. The wool of this animal is coarse and long and is used extensively in China and abroad as carpet wool. Sheepskins are important articles of winter wearing apparel in North China. Sheep intestines are exported as sausage casings. The Chinese sheep produce good mutton, which is consumed extensively throughout the sheep-producing areas.

Goats.—Associated with sheep raising in China, is the goat industry. Goats are not so numerous as sheep, but they probably aggregate between 10,000,000 and 20,000,000. Goatskins and goat hair figure prominently in China's exports.

Hogs.—With probably 80 per cent of China's population on farms, it is reasonable to expect the production of hogs in China to be very considerable. Here again, no statistics are available. One authority makes an estimate of 100,000,000. Compared with the 60,000,000 in the United States, this seems a reasonable estimate. Generally speaking, the white and black swayed-back hog is the prevalent type. The Agricultural Department of the Canton Christian College makes the statement that the average hog of China is raised on clean food, and that the animals are free from disease, except for hog cholera, which is very prevalent. The meat of the

Chinese hog is, according to the same authority, of good quality and cures fairly well. Yunnan, Hunan, and Chékiang hogs are most noted for their ham and bacon producing qualities, particularly the former. The Yunnan ham is famous throughout China for its sweetness and delicacy of texture. Lard, bristles, and pig intestines (for sausage casings) are important export products in China's foreign trade. During the European war, pork was exported in considerable quantities to England.

Poultry.—Every farm and every family in the country in China apparently raises a few chickens. Custom often decrees that any one family or household can raise no more than a specified number, as the fowls are allowed to roam about the village to find their food. Estimates as to the chicken production in China is, at best, guesswork. The statistics for the United States, as given in the Agricultural Yearbook, places the number on January 1, 1924, at 475,000,000. The Ling Nam Agricultural College, Canton, believes that 400,000,000 for China is a very conservative estimate. Probably 600,000,000 would be a better estimate. The greater number of chickens in China are hatched in native incubators of a very economic type. An interesting description of Chinese incubators for poultry is given by the Ling Nam Agricultural College, Canton, in a pamphlet on the subject.

The raising of ducks in China is an extensive industry, particularly in the Yangtze Valley, and in the south. They are tended by duck herders who take them out to feed. Cheap and good feeding is secured through the numerous waterways, canals, and rice paddies which exist in China. The incubation of duck eggs is a thriving industry in the south. The common duck in South China weighs from 3 to 5 pounds, whereas the white Peking duck of North China weighs 6 to 10 pounds. The common duck of the south is often put on the market dried. Chickens are also often treated in the same way. It would probably be correct to state that China is the largest duck-producing country on the face of the earth.

Two of the world's best varieties of geese—the Chinese white, and the Chinese brown—originated in China. Chinese geese are in demand for ornamenting lakes and lagoons in parks and gardens in the western world.

MUSK

China's exports of musk for the year 1923 amounted to 28,000 Chinese ounces, valued at 637,000 taels (about \$500,000 gold). This is the usual annual export. The bulk of it comes from Tibet, the home of the musk deer, from which musk is taken. China seems to enjoy a monopoly on musk from the musk deer. It is estimated that half of the total output is exported. Its principal use abroad is as a basis for perfumes. The scent is the most penetrating and persistent of any known. The Chinese Economic Monthly, of Peking, for June, 1924, published an interesting article on musk production in China. This article states that 20 musk deer are required for 1½ pounds of musk, and that prices in Shanghai at that time were 1,000 to 1,150 taels per 1½ pounds (\$750 to \$850 gold). It is necessary to be on guard against the adulterated product. Dried blood, sand, and the like are used as adulterants. The sacs or

"pods" containing the musk are cut open, a quantity of the adulterating matter inserted, and the "pods" closed with needle and thread.

SAUSAGE CASINGS

China's exports of sausage casings for 1923 were valued at about \$2,500,000 gold, of which the United States took 75 per cent. Tientsin, Shanghai, and Hankow are the principal export centers. The casings undergo cleaning with salt and water and are then assorted into four grades—26, 28, 30, and 32 millimeters in diameter. The smallness of the diameter of the casings determines the relative value. The narrow are more in demand than the wide. Pig intestines are packed with moist salt as a preservative. Sheep casings are assorted into sizes of 15, 17, 18, and 20 millimeters. Sun-dried pig intestines are packed 1,000 rings to the case, which is tin lined, and they are quoted per 100 rings. Sausage casings are generally exported in barrels with a very considerable quantity of moist salt used in preparation. According to the United States tariff of 1922 sausage casings are admitted free of duty.

SILK

The most important article of import into the United States from China in point of value is raw silk. Raw silk is not produced commercially in the United States, in spite of numerous persistent efforts to develop the industry. The raising of the cocoons and the reeling of the silk require an amount of hand labor which makes it impossible for the United States to compete with the Orient.

During the past 50 years imports of raw silk into the United States have increased from 1,000,000 to 50,000,000 pounds. The value of the annual import now reaches nearly \$350,000,000. Of this, Japan contributes about 70 per cent and China about 20 per cent. China's raw silk may be divided into three classes—white, yellow, and wild silk. There are several producing centers, but the best known are Kiangsu and Chekiang Provinces in Central China—the latter Province being especially important—and the Canton region in South China. From these regions white raw silk, which forms the greater part of the silk produced in China, is chiefly obtained. Yellow raw silk comes mostly from Szechwan and Shantung Provinces, while the wild silk, or tussah, is produced chiefly in Manchuria, Shantung, and Chihli.

China's exports of raw silk for 1923, figuring exchange at 1 tael equivalent to \$0.80, were as follows:

Raw silk	Pounds	Value
White:		
Steam filature.....	9,385,000	\$73,600,000
Rereeled.....	1,690,000	7,950,000
Not rereeled, not steam filature.....	415,000	1,750,000
Yellow, steam filature.....	1,040,000	5,970,000
Wild, filature.....	3,914,000	15,560,000
Silk waste.....	17,082,000	9,250,000
Cocoons.....	2,575,000	1,400,000
Cocoons (refuse).....	7,820,000	1,700,000
Total.....	43,921,000	117,180,000

Of the white steam-filature silk, the Chinese customs returns credit Shanghai with 38 per cent and Canton with nearly 60 per cent. These returns show all of Canton's exports as going to Hongkong, whereas 70 per cent actually went to the United States. The returns show 17 per cent as destined to France. Of the yellow steam-filature, Chungking (Szechwan) exported 50 per cent and Tsingtao 40. France took 77 per cent, the United States 12, and Japan 10 per cent. Of the wild filature silk, Chefoo exported 30 per cent, Antung (Manchuria) 50, and Dairen 18 per cent. Japan took 52 per cent, the United States 43 per cent, and the remainder went to France. Of silk waste, Canton shipped 40 per cent, Shanghai 30 per cent, and Antung 8 per cent. Hongkong is credited with taking 45 per cent, France 17, Italy 12, and the United States 8 per cent. As the United States takes at least 60 per cent of Canton's silk waste, America's share of China's waste-silk exports is about 35 per cent. The Chinese customs returns indicate America's imports of Chinese raw silk to be less than 50 per cent of what they actually are, Hongkong receiving credit for the discrepancy in the returns. Very probably the United States takes in the neighborhood of 60 per cent of China's total exports of raw silk.

During the past six years exports of white steam-filature raw silk have increased 70 per cent, yellow steam-filature 100 per cent, raw and wild filature silk 100 per cent, and silk waste 60 per cent. These increases were due in the main to increased purchases in the American market.

In an address before China's first National Industrial Conference in Peking in September, 1924, Mr. C. J. Huber, managing director of the Shanghai International Testing House, attributed the low value per unit of Chinese raw silk to the following causes: (1) Inefficiency in the selection of the mulberry, and poor methods of cultivation, fertilization, and protection from disease; (2) inefficiency in the selection, breeding, feeding, and marketing of the cocoons; (3) lack of economic, rapid, and direct transportation, unhampered by cumulative internal taxation; (4) inefficient, primitive, country methods of reeling a large portion of the cocoons and the preparing of the by-products into an inferior material of low market value; (5) the basing of prices on speculation instead of on cost of production figures.

China's production of raw silk can be increased 400 per cent through the elimination of silkworm diseases. The Silk Association of America is cooperating with the various agencies in China to assist in the eradication of silkworm diseases so as to improve the quality of China's silk and at the same time lower the cost of production. Mr. Huber contends that improvements in mulberry raising will have to be accomplished through educational work, which is now being inaugurated for this purpose.

The result of the lack of economic transportation in its bearing on the silk industry is shown in the case of Szechwan Province, which has a population equal to that of Japan and a raw-silk production next in importance after the eastern Yangtze Valley and Kwangtung Province, yet, because of expensive transportation, the economic value of the raw silk of that region is relatively low.

Much of the country-reeled silk is not salable on the Shanghai market, owing to primitive methods of reeling. This means that large quantities of first-quality cocoons produce a low quality of raw silk, which means, in turn, a distinct and unnecessary economic loss. To remedy this the extension of modern steam filatures for reeling purposes is imperative.

Thus, while the silk industry is one of China's oldest and most important industries and silk the most important item in China's export trade, yet China's position in the American market, the greatest consumer of raw silk in the world, is relatively low. With changed methods, China's silk should become a factor of three or four fold more importance in the American market than it now is.

WOOL

With the sheep of China probably equivalent in number to those in the United States—that is, about 40,000,000—China is naturally a large producer of wool. The sheep of the great northwest territory of China, which produces the largest number, are what might be termed native unimproved stock. It is estimated that an average animal produces but 3 or 4 pounds of coarse wool from 4 to 5 inches long. It is rated as carpet wool in the American market and, as the United States produces no carpet wool, it is admitted free of duty if proof is subsequently furnished that it has been used in carpet manufacture. China's annual exports of wool amount to approximately 50,000,000 pounds, valued at about \$8,000,000. Nearly 90 per cent of China's wool production is taken by the United States. China itself, and particularly Mongolia, uses great quantities of sheepskins for clothing, which materially cuts down the wool production.

After the outbreak of the World War the Persian and Turkish rug markets were in distress, with the result that Chinese rugs became popular in the American market. This has lent a considerable impetus to rug manufacturing in North China. Increasing quantities of Chinese wool are now being consumed in the Chinese rug industry.

Wool is collected in the important commercial centers along the Peking-Suiyuan Railway in northwest China, and also along the Yellow River regions in that territory, and shipped to Tientsin, the commercial metropolis of North China, where it is cleaned, steamed, graded, and press-packed in preparation for export. Wool also reaches Tientsin from other points in North China. Within the past few years the Chinese Eastern Railway has installed a modern cleaning and pressing plant to handle the wool coming from eastern Mongolia to the railway. The railway charges \$13.90 gold per ton of washed wool for washing and sorting, according to color. It estimates that the wool shipped over the Peking-Suiyuan Railway to Tientsin in 1922 was 34,000 tons, compared with 2,700 tons over the Chinese Eastern Railway.

Over 90 per cent of China's wool exports go out through Tientsin. Presumably Chinese Turkestan, Kansu, and Sinkiang produce nearly half of the wool of commerce in China. Sining, in Kansu Province, is the center of the best wool.

Nothing could be written on this subject which would assist the American buyer of China's carpet wool to make more direct con-

tacts with the producers in China. Purchases can be made only through reliable export houses in Tientsin or Harbin. These houses are nearly all foreign—that is, of non-Chinese nationality. Chinese buyers collect the wool, sometimes in outright purchases, often on a barter basis, exchanging yarn, cotton-piece goods, tea, etc., for it. In recent years, buyers have had to use silver dollars and bullion in purchases of wool in Mongolia. The business, like much of the trade in the interior of China, is steeped in old and established customs, which vary with certain sections. All are complicated by variations in the mediums of exchange, systems of weights and measures, official taxations, and other factors. Furthermore, there are no associations or Government agencies which enforce standardizations in quality or in transactions, so that the Tientsin houses often find themselves obliged to clean, grade, and pack wool heavily watered and full of dirt, sticks, and other foreign matter used by producers and smaller dealers to increase the weight.

During 1924 efforts were inaugurated in Tientsin to spin woolen yarn from Chinese wool by modern machinery in order to give the Chinese rug industry a uniform grade of woolen yarn. There are indications that spinning yarn by modern machine methods will develop into an important industry in North China.

According to the United States Tariff Commission's report of 1921, camel's hair in the United States is used mainly for press-cloth requirements in the extraction of vegetable oils, particularly cottonseed oil. At one time considerable camel's hair was used in China in the manufacture of rugs. It is doubtful if much is now used for that purpose, as it commands a considerably higher price. During 1923 China exported 7,500,000 pounds valued at \$1,800,000, of which 75 per cent went to Great Britain and 25 per cent to the United States. Practically all was shipped from Tientsin.

China's exports of goat's hair amount to about 2,000,000 pounds annually, valued at about \$450,000. Great Britain takes the bulk of it and practically all is shipped from Tientsin.

The United States tariff of 1922 provides that wool may be entered under bond and if within three years from the date of importation or withdrawal from bonded warehouse satisfactory proof is furnished that the wool is used in the manufacture of floor coverings, the duties shall be remitted or refunded.

VEGETABLE PRODUCTS

To those who think of China as a land of rice, tea, and silk, it may be surprising to find that it ranks high in corn production, third or fourth among the nations of the world in wheat production, and first in the production of kaoliang (kafir corn), millet, wood oil, beans, sweet potatoes, peanuts, and walnuts. It is third in cotton production, and is noted for its vegetable oils, such as bean, peanut, sesame, rapeseed, castor bean, and wood oil; also for its production of tobacco, sugar cane, edible bamboo, ginger, camphor, cassia bark, China grass, mushrooms, vegetable tallow, licorice, linseed, gallnuts, vegetable dyes, and medicinal herbs. Vegetable gardening is very extensively pursued throughout the country. China is rich in fruits, including citrus varieties, as the plant explorers of the United

States Department of Agriculture have discovered, and is probably the world's largest producer of melons. Buckwheat, barley, oats (some of the huskless type), and alfalfa are common to certain sections of the country. Thus China is rich in variety as well as productivity of vegetable products.

BEANS AND BEAN PRODUCTS

In the past two decades beans and bean products have become very important items in China's export trade, the aggregate value of these products amounting in 1923 to 127,000,000 taels (\$101,600,000 gold), compared with 42,000,000 taels for the year 1910. Thus beans and bean products rank second, following raw silk in importance, in China's list of exports. The customs returns of trade for 1923 list exports of beans and bean products as follows:

Beans and bean products	Short tons	Value	Distribution
Bean cake	1,650,000	\$45,500,000	83 per cent to Japan; 15 per cent to Siberia.
Beans:			
Black	9,000	350,000	
Green	40,600	1,557,000	60 per cent to Japan; the remainder to Hongkong and Straits Settlements.
White	18,200	571,000	
Yellow	1,650,000	35,734,600	40 per cent to Japan; 35 per cent to Siberia; 9 per cent to Dutch Indies; 5 per cent to Port Said.
Other	101,000	3,720,000	80 per cent to Japan.
Bean oil	142,000	14,152,000	27 per cent to Great Britain; 18 per cent to Siberia; 16 per cent to United States; 15 per cent to Netherlands; 12 per cent to Port Said.

The vast bulk of the bean products is from soy beans. The best variety is a small, round, dull type about the size of a dried pea, which contains 22 per cent crude fat, while the ordinary good-quality oil-producing type has an average of 18 per cent crude fat content. The yield from average beans is from 10 to 13 per cent. Green soy beans are rated high in nutritive qualities and are used extensively in the manufacture of bean vermicelli.

Bean oil is used very extensively in China for cooking purposes. Beans are used to manufacture imitation-meat foods for vegetarians. There are restaurants in China which serve fried chicken, fried ham, etc., made of bean composition, but so cleverly done as often to deceive the palate. Bean milk is not uncommon. The Chinese have developed no dairy industry but obtain their needs in butter and fat from bean products. Bean oil is also used for making soaps, as an illuminant, to coat waterproof cloth and paper, and for preparing paper for lanterns and umbrellas.

In other countries the soy-bean oil is used principally in the manufacture of soap, toilet powders, and lubricants, and for cooking and salad oils.

In the United States the soy bean is becoming a crop of importance. It is still used mainly as a forage crop, but will doubtless be developed to produce food for human consumption and oil for industrial purposes. In 1923, 452,000 acres produced 6,500,000 bushels, grown primarily for the beans. There were as many as 2,000,000 acres planted in soy beans for hay and grazing. During 1923 the

United States imported 19,000 tons of soy-bean oil, all of which originated in China.

It is not possible to secure accurate data as to China's production of soy beans. The estimates for the production in Manchuria, which is believed to produce 70 per cent of the entire output of all China, as made by the Chinese Eastern Railway and the Dairen Chamber of Commerce, differ considerably. The Chinese Eastern Railway estimated the 1923 production for the three Provinces of Manchuria as follows:

	Tons
Heilungkiang-----	1, 100, 000
Kirin-----	1, 500, 000
Shengking (Fengtien)-----	1, 100, 000

Total (equivalent to 125,000,000 bushels of 60 pounds each) --- 3, 700, 000

The Dairen Chamber of Commerce's estimate for the same territory for 1923 was 75,000,000 bushels of 60 pounds each. The only recourse under such circumstances is to strike a mean, which would be 100,000,000 bushels, or 3,000,000 short tons. On this basis it is fair to assume that the total production of China is about 140,000,000 bushels.

The Japanese have developed in Manchuria special facilities for handling the bean trade of that region. These extend from agricultural experiment stations for improving the quality of beans produced, to the most modern oil mills for manufacturing the refined product. Facilities have been developed on the South Manchuria Railway and at Dairen for tank transportation, storage of the oil, and for bulk storage of beans. Special warehouse and wharf accommodations facilitate the export of beans and bean products. It is estimated that half of the bean production of Manchuria goes into the manufacture of bean oil and bean cake. Thus it is that Dairen has become the principal port of export for soy beans and bean products.

The United States tariff of 1922 stipulates a duty of 2½ cents a pound on soy-bean oil; one-half cent a pound on soy beans; 35 per cent ad valorem on soy beans prepared or preserved, including soy-bean sauce and bean cake.

CAMPHOR

Natural camphor is produced by a process of distillation. Trees, after reaching about 50 years of age, are cut down and chipped. The chips are boiled in vats and the distillate is collected in crystals. The camphor is then put through a refining process. It is used mainly in the manufacture of celluloid, particularly photographic films, and also in smokeless powder and pharmaceutical compounds. Shortly after Formosa came under the control of Japan the camphor resources of that island were converted into a government monopoly. Subsequently the celluloid industry was developed in Japan. Increasing costs of production in Taiwan (Formosa) have encouraged camphor planting in Japan proper and in certain other sections of the world. Taiwan, however, remains the principal source of supply for natural camphor.

At one time China possessed very considerable resources in camphor trees, but these are being gradually depleted, with little indica-

tions of replanting. However, as the price of camphor advances, it is found profitable to go farther into the interior for resources hitherto of little value because of lack of economic transportation. Kiangsi Province is now the principal source of supply, although Fukien and Kwangtung still continue to figure in the export trade.

In 1907 China exported the largest amount of camphor, about 3,400,000 pounds. The available exports for the three years 1906-1908 were 2,200,000 pounds, whereas the exports for the years 1904, 1905, 1909, and 1910 averaged no more than 800,000 pounds. The average annual exports for the five years, 1919 to 1923, were 2,300,000 pounds. During 1923 China exported 2,000,000 pounds, valued at \$1,130,000. The customs returns for 1923 credit the United States with taking 57 per cent and Hongkong nearly 20 per cent. The shipments to Hongkong, however, were ultimately destined to the United States. Great Britain took 13 per cent and France 9 per cent. The total imports of camphor into the United States for 1923 were 3,500,000 pounds of natural, crude, valued at \$2,215,000, and 4,000,000 pounds of refined, valued at \$2,280,000. The bulk of these imports were from Japan. The 1922 tariff imposed an import duty of 1 cent a pound on crude camphor and 6 cents gold a pound on refined and synthetic camphor. About 60 per cent of China's camphor is exported from the port of Kiukiang, near Hankow; 30 per cent, which probably originated in Kiangsi Province, from Shanghai; and about 10 per cent from Foochow. There are no available estimates as to the camphor resources in China and no present indications of replenishing the decreasing supplies.

COTTON

China ranks third—following in importance the United States and India—as a cotton-producing country. The Chinese Cotton Mill Owners' Association recently compiled a pamphlet on China's cotton production, according to which the average annual production for the five years 1919-1923 was 2,130,000 bales of 500 pounds each. From other data regarding the cotton production of China this appears to be a fair estimate. Owing, however, to the very large consumption of raw cotton in the interior of China for cotton-padded clothing and for the native spinning jenny and the native loom, it is impossible, with the imperfect facilities thus far developed in China in the collection of statistical data, to secure assuredly accurate production figures. The figures compiled by the Chinese Cotton Mill Owners' Association show that Kiangsu Province produces about 30 per cent, Chihli 20, and Hupeh 18 per cent. The other important cotton-producing Provinces are Shantung, Honan, Shensi, Chekiang, Shansi, Anhwei, and Kiangsi, in the order listed.

In the study of Chinese cotton by the National Southeastern University, Nanking, the statement is made that 80 to 90 per cent of the total production of raw cotton in China is from native varieties. The fiber is short and coarse, producing only the coarser yarns. Experiments conducted by the Nanking University have demonstrated that certain strains of American cotton can be successfully acclimated in China. Shensi cotton is probably the most successful American cotton in China. It has a high rating and commands the

best price. In Kiangsi the American strain known as "Trice" has been developed successfully.

The most promising results, however, in connection with the improvement of cotton in China have to do with the experiments made by the Nanking University in developing a native cotton through the process of selection. Mr. Griffing, in charge of this work, discovered a few plants of superior Chinese cotton which are now being cultivated under the name "Million Dollar" cotton. In a report of 1923 the Cotton Mill Owners' Association of China made the following comment:

This cotton excels our ordinary Chinese cotton in texture, length, quality, and color and enables us to spin much finer counts with increased draft. The revolutions of the front roller and the revolutions of the spindles were greatly increased, producing far superior yarns, considerable increase in production, less waste, and economy in labor. We are confident that if it were possible to use this quality of cotton exclusively it would reduce our labor costs 50 per cent.

It appears that the native Chinese cotton will not hybridize with imported varieties. This simplifies considerably the work of improving the native strains. It appears also that China has more to expect by way of cotton improvement through development of native cottons than through imported varieties.

Owing to the rapid expansion of the cotton spinning and weaving industry in China, it is becoming necessary to develop a larger supply of raw materials. Because the individual farmer in China cultivates a small area of ground, averaging probably 2 acres in the cotton-producing sections, it is difficult to make rapid progress in improving cultivation methods. Poor internal transportation, high internal taxes, the lack of Government agencies for improving agricultural and economic conditions generally, and poor marketing systems are some of the factors which militate against rapid improvement in the native cotton industry. There are over 3,000,000 spindles and over 10,000 looms in China, a large proportion of which are financed and operated by Chinese. These cotton-manufacturing interests are sensitive to the imperative need in improvements and extensions in cotton culture and are lending assistance to the work.

China is still, however, an importer of raw cotton. Annual imports average 450,000 bales of 500 pounds each. The customs returns credit British India with furnishing about 65 per cent, Japan 20, and the United States about 10 per cent. It is probable that the bulk of the cotton furnished by Japan is of American origin, as Japan is not a cotton-growing country and is one of America's substantial customers.

During 1923 China exported 260,000 bales of cotton (valued at \$26,000,000), of which Japan took 80 per cent and the United States 12 per cent. In 1922 China exported 224,000 bales, of which Japan took 75 per cent and the United States 16 per cent. China's exports of raw cotton in 1910 were 334,000 bales; in 1911, 234,000 bales; 1912, 213,000 bales; and 1913, 197,000 bales. Thus, roughly speaking, China imports 450,000 bales of cotton annually and exports about one-half as much.

HEMP

Hemp (*Cannabis sativa*) is produced in Szechwan, Shansi, Chihli, Kwangsi, and Honan, and also in smaller quantities in certain other

sections of the country. It is grown mainly for domestic consumption. Probably the best hemp is produced in Szechwan Province. Concerning this, Wilson makes the following comment:

Several plants yielding fibers valued for textile and cordage purposes are grown in China. In Szechwan the most important of these is the true hemp (*Cannabis sativa*), colloquially known as "Hou-ma." This crop is abundantly cultivated around Wenchiang Hsien and P'i Hsien. It is a spring crop, the seeds being sown in February and the plants harvested the end of May and beginning of June, just as they commence to flower. The stems are allowed to grow thickly together and reach 8 feet in height. The culms are reaped, stripped of their leaves, and often the fiber is removed there and then. More commonly, however, the stems are placed in pits filled with water and allowed to rot for a few days; they are then removed, sundried, stacked in hollow cones, surrounded by mats, and bleached by burning sulphur beneath the heaps. After these processes the fibrous bark is stripped off by hand. The woody stems that remain after the bark has been removed are burned, and the ashes resulting, mixed with gunpowder, enter into the manufacture of fire-crackers. Hemp, or "Hou-ma," is the best of the fibers produced in western China for rope making and cordage purposes generally. It is also used locally for making grain sacks and coarse wearing apparel for the poorer classes. Quantities are used in the city of Paoning Fu for these latter purposes. It is in great demand on native river craft and is largely exported down river to other parts of China. It is this hemp that is principally exported from Szechwan. True hemp (*Cannabis*) is an annual and is grown as a summer crop in the mountains for the sale of the oil-containing seeds. Hemp oil is expressed and used as an illuminant and is said not to congeal in the coldest weather. In Hupeh it is known as "Tang-ma."

China exports annually about 8,500 tons of hemp, valued at \$1,280,-000 gold, 40 per cent of which goes to Hongkong, 35 to Japan, 5 to Belgium, 4 to Germany, and 3 per cent to the United States.

KAOLIANG AND MILLET

Kaoliang (sorghum) and millet constitute two of the very heavy grain-producing cereals of North China and figure prominently both for human and for animal food. The cleaned white kaoliang is used for porridge and the uncleaned grain as cattle and poultry food. It is particularly valuable as poultry food. The plant sometimes reaches 12 feet in height and is known to contain as many as 5,000 seeds to the stalk. Fifty varieties of the plant have been identified in North China. The stalks of the plant are used with clay for roofing, for building walls and fences, for matting, and as fuel. The green blades on the stalks are plucked for fodder. The seed stalk is used for making brooms. The red varieties are particularly adapted to the manufacture of a distilled liquor extensively used throughout China. Some varieties are used in the manufacture of glucose and for brewing purposes. It is estimated that 15 per cent of the cultivated area of Manchuria is planted in kaoliang.

China's exports of kaoliang and millet for 1923 were equivalent to 225,000 short tons, valued at about 12,000,000 taels, or \$9,600,000, nearly all of which went to Japan and Chosen.

The United States tariff of 1922 imposes a duty of 2 cents a pound on sorghum seed and 1 cent a pound on millet seed.

LACQUER VARNISH

The lacquer industry apparently originated in China, the Japanese learning the art from the Chinese. Japan imports from China considerable quantities of lacquer varnish, taking practically all of

China's exports of about 2,500,000 pounds annually, valued at approximately \$1,000,000. Hankow, Ichang, and Yochow, in the order named, are the principal ports of export. The poisonous properties which this varnish possesses have prevented it from finding a market in occidental countries.

Foreigners erroneously designate lacquer as "Ningpo varnish," for the reason that they came into contact with it for the first time at the port of Ningpo. It is produced from a tree grown in the mountainous regions of western Hupeh and eastern Szechwan. Wilson, in *A Naturalist in Western China*, gives an excellent detailed account of this tree and its product. When the tree has attained a diameter of about 6 inches, tapping commences and is conducted at intervals until the tree is 50 or 60 years of age. The tapping operation occupies a period of about 50 days, after which the tree is allowed a period of 5 or 7 years to recover. To prevent contact with the air, the crude varnish is covered as quickly as possible with layers of oil paper. It furnishes only one color, black, and is considered the most indestructible varnish known. According to Wilson, brown varnish is obtained by adding "pei-yu," which is crude wood oil, boiled for an hour into a sirupy oil; and red, by adding cinnabar to the brown in equal parts. This varnish hardens only in a moist atmosphere, and in China is applied only during moist or cloudy weather. In indoor work drying is facilitated by hanging about the rooms cloths saturated with water. Should a chemist succeed in depriving the lacquer of its poisonous qualities, it would undoubtedly become a valuable article of commerce with western nations.

LICORICE ROOT

Licorice root is used in the United States as an indispensable ingredient of chewing tobacco, in certain chewing gums, and medicinally. Prior to the European war the American supplies were obtained from Asiatic Turkey. Since then the United States has become an importer of licorice root from China, but in a small sporadic way, apparently depending upon the silver exchange fluctuations as they influence market prices. During 1923 the United States took nearly 60 per cent of the exports of licorice root from China—about 10,000 pounds, valued at \$835,000 gold. Tientsin and Dairen are the principal ports of export, as the product is confined to North China. The United States tariff of 1922 imposed a duty of one-half cent a pound on licorice root.

LINSEED

Flax, as an article of commerce, is grown in northwestern Chihli and in sections of Mongolia. Undoubtedly the industry could be developed to considerable proportions if it proved profitable. Flaxseed is collected at Kalgan and sent from there to Tientsin for export. Exports in 1922 amounted to 37,000 short tons, of which 13,000 went to France, 8,000 to Great Britain, 6,000 to the United States, 3,500 to Belgium, 2,000 to Japan, and 1,500 each to Netherlands and Germany. The 1923 exports dropped to 8,800 tons, of which Japan took 6,000 tons and Great Britain and the United States about 1,000 tons each. Of the 5,000 tons exported in 1921, the United States took nearly 80 per cent.

Linseed oil is considered the best oil for making putty. It is used also in making so-called "vulcanized oil." It figures in the manufacture of linoleum, oilcloth, patent leather, lithographic inks, soaps, and paints. In the manufacture of certain paints and of varnishes it has been largely replaced within recent years by wood oil, which possesses superior drying qualities.

Importers of Chinese linseed are obliged to safeguard themselves against adulterations. The 1922 United States tariff provides an import duty on linseed of 40 cents per bushel of 56 pounds and 3.3 cents a pound on linseed oil.

NUTGALLS

Nutgalls are not produced in the United States. They are the excrescences caused by the puncture of insects (the gall wasp) for laying their eggs, usually on oak trees. The green galls are of higher quality, the white galls, from which the insect has escaped, being considered inferior. Chinese galls are produced on the *Rhus semialata* and contain about 70 per cent tannin or tannic acid.

China's exports of nutgalls steadily increased from 2,300 tons in 1912 to 5,900 tons in 1923, valued at \$1,000,000 gold. The United States took 30 per cent, Japan 30, Belgium 15, Great Britain 13, and Denmark 8 per cent. It is probable that a considerable quantity of Japanese imports were reexported to the United States. Hankow and Yochow, in the central Yangtze region, are the principal ports of export. Nutgalls are used principally for tanning leather, in dyeing, and in the manufacture of ink. They are admitted into the United States duty free for tanning, but the extracts of nutgalls containing less than 50 per cent by weight of tannic acid are assessed 4 cents a pound; those containing more than 50 per cent, 10 cents a pound.

PEANUTS AND PEANUT OIL

China has become one of the greatest of peanut-producing countries. As with other agricultural products, it is possible only to make estimates. The Chinese people themselves consume enormous quantities of peanuts; hence we are not to consider the exports as indicative of the country's production. Shantung Province is the principal peanut-producing center of China. Chihli, Honan, and certain other Provinces in China also produce peanuts in large quantities. Tsingtao, in Shantung, has developed as the chief exporting center.

The exports for the years 1919-1923, inclusive, are as follows:

Products	1919		1920		1921		1922		1923	
	Short tons	Value ¹	Short tons	Value ¹	Short tons	Value ¹	Short tons	Value ¹	Short tons	Value ¹
Peanuts:										
In shell.....	9,200	527	7,300	439	27,300	1,667	29,300	1,987	58,000	4,000
Kernels.....	77,700	5,323	77,200	5,610	76,600	5,460	60,000	4,806	91,600	8,000
Peanut oil.....	81,600	13,950	55,000	9,315	31,000	4,513	25,600	4,340	31,000	6,175
Total.....	168,500	19,800	139,500	15,364	134,900	11,640	114,900	11,133	180,600	18,175

¹ Thousands of haikwan taels.

Roughly, 100 pounds of peanuts in the shell are equivalent to 75 pounds of shelled peanuts and to about 30 pounds of peanut oil. This makes exports from China average the equivalent of at least 300,000 short tons of peanuts in the shell. It would seem conservative to reckon China's entire peanut production at three times the amount of its exports, or, roughly, 900,000 tons. The 1923 United States Agricultural Yearbook gives America's production for 1923 as 312,230 tons and shows the average yield per acre as 720 pounds, which is somewhat higher than the yield per acre for 1922 and 1921. Vice Consul Milbourne, at Tsinan, has ascertained that the Chinese in Shantung consider 2 piculs a mow—that is, 1,600 pounds to the acre—as a fairly low average yield for that Province. Shantung Province produces, it is estimated, about 250,000 tons of peanuts annually, or probably a little more than one-quarter of China's entire output.

While an American missionary deserves the credit of introducing the big peanut of America to China for propagation purposes, the Germans in Tsingtao and Shantung pushed the trade itself and the facilities which opened the markets of the world to China as a source of supply.

China's average annual exports of peanuts in the shell for the four years 1910–1913, inclusive, were 67,000 short tons. For the four years 1920–1923 the average was 30,000 tons, although for the year 1923 the exports were 58,000 tons. Of peanut kernels the trade had apparently not developed before 1914, as no returns are given prior to that year. The average exports of peanut kernels for the four years 1920–1923 were 76,000 tons, with 91,600 shipped in 1923. Reckoning 100 pounds of unshelled nuts as equivalent to 75 pounds of kernels, the average of 76,000 tons would be equivalent to 103,000 tons of peanuts, which, added to 30,000 above, gives us the equivalent of 133,000 tons of peanuts in the shell as the average for the four years 1920–1923. Hence the trade doubled during this decade. As for peanut oil, the average annual exports for the four years 1910–1913 were 16,500 short tons; the average annual exports for the four years 1920–1923 were 35,000 short tons, or an increase of more than 100 per cent.

The commissioner of customs at Tsingtao, in his 1923 report, states that the greater part of the 15,000 tons of peanut kernels shipped to Japan subsequently went to the United States. The United States took 25 per cent of the peanut oil and the Straits Settlements nearly 20 per cent. The United States customs returns for 1923 show imports of peanut oil of about 4,000 tons. It may be surmised that the additional 4,000 tons credited to the United States probably went to Canada. It is interesting to note that the 1923 customs returns for peanut oil showed practically no exports to Great Britain, whereas during 1921 and 1922 Great Britain took 30 and 25 per cent, respectively, while the direct exports from China to the United States for those years were inconsiderable.

In the United States peanut oil is used as a salad oil, as a substitute for olive oil, as an ingredient of margarine, and for soap making. It is contended that the finest oil is cold pressed, although a much larger yield can be obtained by hot pressing; but the cold-

pressed oil needs no refining if produced from clean nuts. The peanut cake from which the oil is expressed makes excellent cattle feed, and if selected, high-grade, well-blanchd nuts are used the cake can be ground with flour for certain kinds of bread.

In view of the United States import duty of 4 cents a pound on peanut oil, it is not likely that the exports for succeeding years will be maintained at the figures for 1923, which, when the tariff is considered, were abnormally high.

The United States tariff for 1922 provides a duty of 3 cents a pound on peanuts in the shell, 4 cents a pound on shelled peanuts, and 4 cents a pound on peanut oil.

RAMIE AND GRASS CLOTH

Considerable efforts have been made in the United States to interest communities in ramie (China grass) and ramie fiber for high-class fabrics. It appears that the greatest difficulty incurred is that of producing a machine for decorticating the grass. In China, however, where labor is cheap and plentiful, this work can still be done by hand in a profitable way. Wilson, in *A Naturalist in Western China*, says of ramie:

The most important textile plant in China is the much-discussed China grass, ramie, or rhea (*Bahmeria nivea*). This member of the nettle family is both wild and cultivated in all the warmer parts of the Middle Kingdom up to 4,000 feet altitude. It is a herbaceous perennial and grows 3 to 6 feet tall; the leaves, broadly ovate, abruptly cuneate or truncated at base, have dentate margins and are silvery on the under side. In Hupeh the wild plant is called "Ch'u-ma," the cultivated plant "Hsien-ma." In Szechwan the cultivated plant is also known as "Hsien-ma" and occasionally as "Yuang-ma." These various colloquial names are most perplexing and are almost hopelessly confused.

In Szechwan small patches of this "China grass" are to be found around nearly every peasant's home. Southwest of Chungking and also north of Lu Chou, in several districts, it is cultivated on a very extensive scale. Much of the fiber is woven into "grass cloth" and used locally. A certain amount is also exported down river. Szechwan "grass cloth" is rather coarse and very much inferior to that produced in parts of southern China.

Kwangsi Province is the principal center of production, at least so far as concerns the trade in ramie fiber, although it is also cultivated in Szechwan, Hupeh, Hunan, Kweichow, and Kwangtung.

China grass is differentiated from hemp in that it is never irrigated, although the districts in which it is produced have a rainfall of 35 to 40 inches a year. The plant lives five to seven years, and as many as three cuttings a year are made. The stalks are stripped of leaves, bundled according to size, and soaked for a few days in solutions prepared for the purpose. The fiber is then removed by a beating and soaking process, while at the same time the mucilaginous substances in the plant are scraped off with dull-edged knives by hand, mostly by women and children. The fiber is then boiled, sometimes in lime water, and beaten so as to remove the resin and gum and make possible the separation of the fibers. This process of cleaning the fiber as carried out in China is very crude.

In China ramie is bought according to quality, crop, and length. The longer fibers and those from the first crop realize better

prices. The fiber produced has a silky luster, is very durable, and is less affected by moisture than is any other fiber. It is one of the strongest and finest of fibers, lacking, however, in elasticity. It can be spun as fine as flax, but is stronger and possesses a more brilliant luster. In combination with silk it is sometimes used to produce an imitation silk fabric.

The average annual export of ramie fiber for the four years, 1910 to 1913, was 11,700 tons, valued at 2,230,000 taels. For the five years 1919 to 1923 the annual exports averaged 12,500 tons, valued at 2,800,000 taels (\$2,240,000 gold, at the 1923 rate). Ninety per cent of the ramie exports from China are taken by Japan.

Exports of grass cloth from China during the four years 1910 to 1913 averaged 3,000 tons, valued at 1,450,000 taels. Exports for the five years 1919 to 1923 averaged 2,000 tons, valued at 3,200,000 taels (\$2,560,000 gold at the 1923 rate). Seventy-five per cent of China's grass cloth is taken by Chosen and 15 per cent by Japan. In Chosen it is used for the manufacture of men's clothing, as it is well adapted to the national costume of that country. Kiukiang, Chungking, and Swatow, in the order named, are the principal export centers for China grass cloth, and Kiukiang, Hankow, and Yochow, in the order named, for the export of ramie or China grass.

The United States tariff of 1922 admits China grass free of duty and charges a 40 per cent duty on grass cloth.

RHUBARB

The Materia Medica of China contains a wealth of plants which, through the long experience of many generations of the Chinese people, have proved of remedial value. Szechwan Province, which is the richest source of Chinese medicinal products, produces the best quality of rhubarb. Wilson mentions the rhubarb plant as occurring in the highlands of the borderland between China and Tibet, the wild plant being esteemed the best drug. He states that the Chinese rhubarb is obtained from the plant known botanically as *Rheum palmatum*. The variety known as "tanghuticum" is most commonly met with through the extreme northwest of China. The roots are dug when 6 to 7 years old, are peeled and cut in pieces, placed on strings, and suspended to dry. The principal Chinese ports of export for rhubarb are Chungking and Hankow. China exports about 500 tons annually, of which the United States takes about 20 per cent, which is admitted free of duty as crude nonedible drug.

RICE

China probably ranks next after India in its rice production. India's production of cleaned rice for 1922, as given by the United States Department of Agriculture Yearbook, was about 75,000,000,000 pounds, or an average of 70,000,000,000 pounds for the years 1917 to 1922. The figures for the Japanese Empire, including Formosa and Chosen, are, for 1922, roughly 25,000,000,000 pounds, which represents Japan's average annual production. There are no reliable figures for China's production. However, considering the fact that about 150,000,000 people of northern China are without

the rice-producing belt and consume little or no rice, and making allowance for the fact that the consumption of rice by the people of the south is lower per capita than that of the Japanese because of the greater poverty among the masses in China, many of whom subsist on cheaper food products than rice, and because of the greater variety in the dietary of the wealthier classes of Chinese as contrasted with Japanese, we may estimate China's per capita consumption as between one-third and one-fourth of that of Japan, or, roughly speaking, we may credit China's production with about 40,000,000,000 pounds (700,000,000 bushels) of cleaned rice. We may assume that the imports and exports of rice in Japan about counter-balance. China's imports of rice during the three years 1921 to 1923 averaged 2,400,000,000 pounds, which is 6 per cent of its estimated production. In 1923 the imports rose to 8 per cent of the production. Poor crops during the past few years, disturbed internal political conditions, and a more extensive growing of opium accounts for the lessened production.

China's exports of rice are nil. In fact, the exportation of rice is prohibited, although permits were issued during 1923 for the export of about 2,000,000 pounds, the bulk of which went to Japan. Imports of rice for the four years 1910 to 1913 averaged 16,700,000 bushels, or 800,000,000 pounds a year, valued at 1.32 taels a bushel. For the three years 1921 to 1923 the average annual imports were 2,400,000,000 pounds (40,000,000 bushels), valued at 1.83 taels a bushel, an increase of 40 per cent in value. The imports for 1923 were 3,000,000,000 pounds, or 50,000,000 bushels, valued at about \$80,000,000 gold, or 1.96 taels a bushel (\$1.57 gold), or nearly 50 per cent advance over the average value quoted for 1910 to 1913. China's rice imports came chiefly from Saigon, Rangoon, and India.

In southern China two crops a year are produced. The average production per acre for water rice is about 30 bushels of 60 pounds each, although in many places 40 bushels are produced. Glutinous rice is raised for flour production and is baked into cakes. Puffed rice is made from the glutinous variety. The rice is placed in a large iron kettle along with finely powdered charcoal and is heated while being constantly stirred. Rice straw is extensively used throughout China for manufacture into paper. It serves also as thatch for houses, as bedding for cattle, and as fuel. Rice wine is the most commonly served alcoholic beverage in China, and rice husks are used for preserving eggs and fresh fruits and as fuel.

SESAME AND RAPESEED

The seeds of *Sesamum indicum* yield from 30 to 50 per cent of a thin yellow oil, which is odorless, is possessed of a pleasant flavor, and does not become rancid on exposure. The best qualities are used as table oils, as an adulterant for olive oil, and as a constituent for oleomargarine, while the poorer qualities are used in the making of soap. Owing to the poor facilities in China for expressing and refining the oils of the various seeds, sesame, like rapeseed, is sent abroad and the oil is expressed in other countries.

Sesame is produced extensively in the Yangtze Valley, but more particularly in the Yellow River Basin, where light, sandy soil

favors its growth. One will often see it planted in cotton fields, but it matures slightly ahead of the cotton bolls. The seeds are used extensively as a food throughout North China, where they are sprinkled on sweetmeats and cakes, but the plant is valued chiefly for its oil. The oil is much more valuable than rapeseed oil; hence there is a tendency to adulterate it with the cheaper oils.

In China sesame oil is used for cooking, as an illuminant, and as a lubricant. China's exports of sesame seeds for 1923 were 128,000 short tons, valued at \$9,600,000.

Hankow is the chief center of export. Italy took 33 per cent, Japan and Chosen 16, Germany 15, and Netherlands 14 per cent. The 1922 exports were 85,000 tons; 1921, 100,000 tons; 1920, 137,000 tons; 1919, 188,000 tons; or an average of 128,000 tons a year for the five years indicated.

Rapeseed oil is used in the soap industry, for lubricating purposes, and for quenching steel. In China it is used in cooking, as an illuminant, and in making candles. The leaves and the young shoots make a nutritious food. The refuse or cakes are in great demand for fertilizer. The stalks are used as a screen for the protection of tobacco seedlings and in hurdles to serve as spinning ground for the silk cocoons. Rapeseed yields about 32 per cent of oil. It is an important product of the central Yangtze Valley region and is a winter crop. Harvested in April, it does not interfere with the planting of rice, cotton, and other crops. In 1923 China exported 33,000 short tons of rapeseed, valued at \$1,600,000. Ninety-five per cent of this went to Japan, where it was probably crushed into oil, part of which was exported, some undoubtedly going to the United States, for Japan is named as the chief source of supply for American imports of rapeseed oil. China's exports of rapeseed for 1922 were 40,000 tons; for 1921, nearly 80,000 tons; for 1920, 15,000 tons; and for 1919, about 50,000 tons, nearly all of which went to Japan. Thus the average annual export of this product for the 10 years was 40,000 tons.

Sesame seed and oil are admitted into the United States free of duty by the 1922 tariff. Rapeseed is admitted free, but a duty of 6 cents a gallon is imposed on rapeseed oil.

TEA

At one time China supplied the world with tea. But in 1838 the first Indian tea reached the London market, and by 1888 the English people were consuming as much tea from India and Ceylon as from China. In the United Kingdom the annual per capita consumption of tea is over 8 pounds, while it is slightly less than 1 pound in the United States. The consumption of tea in the United States during the past two decades has not kept pace with the increase of population.

The following table based on United States official statistics of imports shows the total number of pounds of tea imported by the United States for the years 1911 and 1923:

Imported from--	1911		1923	
	Pounds	Value	Pounds	Value
United Kingdom.....	12,980,000	\$3,470,000	13,800,000	\$5,490,000
British East India.....	11,950,000	2,000,000	22,750,000	7,950,000
China.....	18,000,000	2,120,000	19,800,000	3,330,000
Dutch East Indies.....			10,230,000	2,930,000
Japan.....	57,300,000	9,800,000	36,200,000	9,200,000
Other countries.....	3,970,000	900,000	4,300,000	1,000,000
Total.....	104,000,000	18,290,000	107,080,000	30,000,000

In 1923, 52 per cent of the American purchases of tea were black teas; 13 per cent oolong (a half-fermented tea, neither black nor green); and 35 per cent green teas.

China's tea exports during the three years 1921, to 1923 were:

Kinds	1921	1922	1923
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Black tea.....	18,000,000	35,000,000	60,000,000
Green tea.....	35,700,000	37,700,000	38,000,000

The average exports of tea for the years 1910-1913 were as follows: Black tea, 95,000,000 pounds; green tea, 30,000,000 pounds; brick tea, 71,000,000 pounds. Since the Russian revolution the trade in brick tea has become negligible.

While China's export trade in green tea during 1921-1923 remained practically stationary, exports of black tea for 1923 increased 60 per cent over those of the previous year and about 300 per cent above the exports of 1921. However, compared with the exports of 1919, they show an increase of but 65 per cent. The statistical secretary, in his report on foreign trade of China for 1923, attributes the increased exports of black tea to poor crops in India, Ceylon, and Java, and to a greater demand for black teas from markets which in former years consumed small quantities only.

Of China's exports in 1923, Great Britain took 30 per cent, the United States 18, Hongkong 13, Germany 6, and the Netherlands 5 per cent. The American imports of 1923 were double those of the previous year, and about four times those of the year 1920. Great Britain's imports in 1923 were nearly three times as great as those of 1922, but in 1919 they were about the same as in 1923. United States imports of green teas from China for 1923 were about 8,700,000 pounds, which was slightly less than for 1922, and about 40 per cent less than for 1921, although they compared favorably with the imports for 1920 and 1919. Of China's green tea exports for 1923, the Near East and the United States each took about 25 per cent, the Dutch East Indies 18, and Hongkong 12 per cent. In 1921 the United States took 15,000,000 pounds, or nearly 40 per cent of China's green tea.

Next after water, tea is probably the most extensively used beverage of the human race. In the aggregate the Chinese consume

more tea than is used by any other people. A Chinese in preparing a cup of tea places a pinch of leaves in the cup and pours boiling water over them, then places the cover on the cup to allow the tea to steep for a minute or two. He uses neither sugar nor milk with his tea, and in this way receives the fullest benefit of the delicate aroma and subtle flavor. Some Chinese teas are artificially scented with the petals of the jasmine or gardenia flowers. The higher-grade teas, however, are not artificially scented. Some of the exceptionally high-grade Chinese teas command prices ranging from \$10 to \$20 a pound.

In China tea is not grown on plantations. The individual families cultivate small pieces of ground, hence control but small holdings. There has been a tendency in recent years for some of the tea producers to cultivate tea on larger plantations. Up to the present no progress has been made in China in the use of machinery for preparing tea, as is done in India, Ceylon, and Java. The absence of large plantations which would furnish uniform, standard quantities and qualities has discouraged efforts toward the use of machinery. In China the tea leaves are picked by women and girls three or four times during the season. The leaves are withered in the sun after picking and then fired over charcoal fires. In the case of green teas the leaves are roasted almost immediately after they are picked, rolled into balls by hand to crack the veins and set the acids, and then dried quickly. Black teas are subjected to a longer process of firing and drying. The oolong teas, which are, strictly speaking, neither black nor green, require a very elaborate process of hand rolling.

The principal ports of export are Hankow, Kiukiang, and Foochow for black teas; Hangchow, Ningpo, and Kiukiang for green teas; and Foochow for oolong teas.

Tea has been accepted duty free in the United States since the year 1833.

TOBACCO

Tobacco was introduced into China as early as 1600, and to-day the people are almost universally habituated to its use, principally in the form of pipe and cigarette tobacco. It is produced extensively throughout the country, Szechwan, Hunan, and Fukien probably being the largest producers. The native tobaccos seem to be well adapted to pipe consumption. During the past two or three decades the Chinese have been educated by a very enterprising campaign of advertising to the use of cigarettes. This has resulted in the development of a considerable manufacture of cigarettes in China by the companies responsible for the marketing of cigarettes. One of these firms has done a very considerable amount of pioneer work in encouraging the Chinese to produce leaf tobacco suitable for cigarette manufacture. Much of this work has been carried on in Shantung Province. The company contracts with the growers to purchase tobacco produced from seed furnished by the company, provided, of course, that the seed furnished meets certain requirements concerning quality. It has been demonstrated that China can produce high-class leaf tobacco. In certain sections soil and climatic conditions are excellent. The country also possesses the advantage of a plentiful

supply of cheap and satisfactory labor. The Chinese farmer is industrious and is receptive to suggestions for improved methods which will net him greater profits on his products.

While tobacco is grown extensively, the industry lacks organization. Tobacco is generally grown along with other crops on small holdings. There have been no governmental or other organizations to aid the growers in improving methods of culture or of marketing the products.

The Province of Szechwan probably produces more tobacco than is produced in any other Province in China. The product, which is famed for the excellent flavor of its leaf, is used for the manufacture of a certain type of cigar.

Exports of leaf tobacco from China for the three years 1921-1923 averaged 14,000 short tons, valued at about \$2,800,000. Exports of prepared tobacco averaged about 4,000 tons a year, valued at \$1,800,000. China has also become an exporter of cigarettes. The returns for the three years mentioned indicate a steady increase in cigarette exports. In 1921 they amounted to about 11,000,000 pounds, valued at \$10,000,000, and in 1923, 12,000,000 pounds, valued at \$11,300,000. Of these exports 50 per cent went to Singapore and the Straits Settlements and the remainder to the Dutch East Indies, Hongkong, and Japan. It is quite likely that the bulk of the cigarettes shipped to Hongkong was transshipped to South China. The trade with Japan for 1923 was unusually large, possibly owing to a shortage of local production following the earthquake and fire disaster of September of that year.

China's imports of leaf tobacco for 1921 were 15,000 tons, valued at \$10,000,000; in 1922, 17,000 tons, valued at \$10,000,000; and in 1923, 21,000 tons, valued at \$10,000,000. The variations in exchange account for the uniformity in the gold valuation. Eighty per cent of the leaf tobacco is credited to the United States and 10 per cent to Hongkong, but the bulk of the Hongkong imports originated in the United States. China imported 8,530,000,000 cigarettes in 1921, valued at approximately \$20,000,000. The imports in 1922 were 10,250,000,000, valued at \$24,000,000. Estimates as to China's present consumption of cigarettes range from 40,000,000,000 to 60,000,000,000 annually.

TUNG OIL

Wood (tung) oil has become indispensable to the paint and varnish industries in America. To the varnish manufacturers it possesses superior drying qualities to linseed oil. Mr. Williamson, of Gainesville, Fla., in a study of the tung-oil tree, states in regard to tung oil:

When combined with southern rosin and other substances into a varnish, it makes a spar varnish much more satisfactory than copal varnish, which was formerly the standard in varnishes. When this varnish is properly made and applied, a piece of wood covered with it may be kept in boiling water for 15 minutes without either whitening or softening the film. It is largely used in the manufacture of paints, as well as varnish, particularly for enamel, floor, and wall paints. It is used in the place of linseed oil in the making of linoleum and oilcloth. The peculiar properties of the oil make it highly important to the paint, varnish, and allied industries that a constantly increasing and regular supply be made available.

The standard test for tung oil, as published by the American Society for Testing Materials and to which all tung oil should conform, is as follows:

Items	Maximum	Minimum
Specific gravity at 15.5° C.....	0.943	0.939
Acid number (alcohol-benzol).....	7.000	
Saponification number.....	195.000	190.000
Unsaponifiable matter, per cent.....	.760	
Refractive index at 25° C.....	1.520	1.515
Iodine number (Wijs).....		163.000
Heating test, minutes.....	12.000	

China's exports of wood oil have doubled in quantity during the past 10 years. The exports from China to the United States during this period have trebled. For the year 1923 China exported 836,900 piculs, or 14,300,000 gallons. According to the United States statistics of imports, the United States during 1923 imported 11,640,000 gallons of wood oil, all from China. The Chinese customs returns of trade for 1923 show 594,000 piculs exported to the United States and 108,000 to Hongkong, the latter being transshipped to the United States, thereby making a total of 12,000,000 gallons exported to the United States, which country therefore took about 85 per cent of China's exports of wood oil, amounting in value to 17,500,000 taels or \$14,000,000 gold.

Over 90 per cent of the wood oil from China comes from the upper Yangtze regions and is shipped out from the port of Hankow. The industry has become one of such importance that tank steamers take the oil from China to the United States. It is collected in big storage and settling tanks in Hankow, where it is prepared for export abroad.

While the quantity exported from China during the past 10 years doubled, the valuation, as given in the customs returns of trade, increased fivefold. During the summer of 1914, a picul of wood oil could be purchased at Hankow for 8.50 taels. During the spring of 1924 the price rose to 40 taels a picul, but toward the end of the year fell to 20 taels a picul, which appears to be in the neighborhood of the present normal price.

In the interior of China, where the tung trees grow, the industry is in a crude state. This applies to gathering the nuts, expressing the oil, and shipping it to export centers. Furthermore, as most of the oil comes from the upper Yangtze regions, shipments are subject to the hazards of transportation through the Yangtze rapids. During the past few years political conditions in the interior of China have been much disturbed. Semi-independent military chieftains have assessed taxes on commodities to the limit which the traffic would stand. These exactions have added heavy burdens to the wood-oil interests. Chinese dealers, who go into the country to buy from the producers, respond very quickly to speculative influences, so when it was discovered that the American market could take all the wood oil that China could produce, prices soared to speculative figures.

One of the greatest handicaps from which the industry suffers is lack of organization to insure standardization of quality. The

use of the various cheap oils, such as bean, rapeseed, sesame seed, etc., for adulterization is difficult to combat. The superior quality of tung oil as produced in the United States by nuts grown there indicates clearly the difficulties attendant on producing uniformly high-grade oil in China. Like most other native industries in China, wood oil is in the hands of many individuals, none of whom control a very large number of trees or extensive facilities for pressing the oil from the nuts. Foreigners have not yet been able to handle the business by modern methods. The best they have been able to do up to the present is to provide facilities for getting to Hankow the oil manufactured by native processes and there refine, store, and ship it.

The best producing regions in China are the central and upper Yangtze sections. Szechwan, Kiangsi, Hunan, Hupeh, Kweichow, Kwangsi, and Kwangtung are noted for tungyu trees, but the latter two Provinces produce a variety, the *Aleurites fordii*, which is not considered equal to the *Aleurites montana* produced in the other Provinces mentioned. A tree bears well after five years of growth from seed. According to E. H. Wilson, who publishes an excellent account of the tung tree, in Volume II, of *A Naturalist in Western China*, it grows best where the rainfall is not less than 28 to 30 inches, and the temperature does not drop below 28° F. Mr. Wilson gives the yield per tree as varying from 1 to 5 bushels or more of unhulled fruit, according to the size of the tree. The Chinese, with their crude methods, secure only about 20 per cent of oil from the seeds. Mr. Williamson states that American tung-oil seeds properly handled will produce 34 per cent of oil.

The Chinese have used tung oil from time immemorial, and large quantities are employed in native industries. Junks are oiled with tung oil and calked with a mixture of tung oil, lime, and chopped hemp. It is an ingredient in the Chinese lacquer varnishes and is used also as a waterproof covering of wood, paper, silk, and other materials. The soot of tung oil is used in the manufacture of high-grade Chinese inks.

There are hill lands in South and Central China which are well adapted to tungyu culture and which could easily be made available for a more extensive planting of tung trees. The Chinese respond quickly to opportunities for producing that which will net the greatest profits. It would be dangerous, however, for American paint and varnish interests to depend upon a monopoly of supply from China, on account of the varying factors in the industry which militate against standardization and modern organization. Thus it is highly necessary that a secondary source of supply be assured. Wood or tung oil is admitted into the United States duty free by the tariff of 1922.

VEGETABLE TALLOW

Among the plants peculiar to China is a tree, a member of the spurge family, which yields a product of commercial value known as vegetable tallow. Ernest Henry Wilson, in *A Naturalist in Western China*, makes the following statement regarding this tree:

Sapium sebiferum occurs in all the warmer parts of China, and is remarkable for the beautiful autumnal tints of its foliage. This tree is known by several colloquial names. In southern China it is the "Chiu-tsu shu"; in

central parts the "Mou-tsu shu"; in the west the "Ch'uan-tzu shu." It is a long-lived tree, growing 40 to 50 feet tall, and having a girth of 5 to 6 feet at maturity. In Hupeh, where the industry is well looked after, the larger branches are kept "headed in" to facilitate the gathering of the fruits. The fruits are three-celled, flattened-ovoid, about 15 millimeters in diameter. When ripe they are blackish-brown and woody in appearance, and are either gathered from the trees by hand or knocked off by the aid of bamboo poles.

After being collected, the fruits are spread in the sun, where they open, and each liberates three elliptical seeds, which are covered with a white substance. This covering is a fat or tallow, and is removed by steaming and rubbing through a bamboo sieve having meshes sufficiently small to retain the black seeds. The fat is collected and melted; afterwards it is molded into cakes, in which state it is known as the "Pi-yu" of commerce. After the fatty covering has been removed the seeds are crushed, and the powdered mass undergoes the same processes as described for extracting wood oil. The oil expressed from the seeds is the "Ting-yu" of commerce. Very often no attempt is made to separate the fat and the oil. The seeds with their white fatty covering are crushed and steamed together and submitted to pressure, the mixed product so obtained being known as "Mou-yu." The yield of fat and oil is about 30 per cent of the weight of the seeds. In China all three products are largely employed in the manufacture of candles. The pure "Pi-yu" has a higher melting point than the "Ting-yu" or the mixture "Mou-yu." All Chinese candles have an exterior coating of insect white wax, but when made from "Pi-yu" only the thinnest possible covering of wax is necessary (one-tenth of an ounce to a pound).

Vegetable tallow is used in America and Europe for the manufacture of high-class toilet soaps and face creams. For many years America received considerable supplies from China through England, but in more recent years the trade has become direct. As will be noted from the following table of exports from China, the United States took 70 per cent of China's exports of vegetable tallow in 1923. The tariff of 1922 admits it duty free. The principal port of export in China is Hankow.

Years	Tons	Hankwan taels ¹	Distribution
1910----	10,000	1,600,000	Netherlands, 45 per cent; Great Britain, 25 per cent; Germany, 15 per cent; Italy, 8 per cent.
1911----	3,000	480,000	Great Britain, 40 per cent; Italy, 30 per cent; United States, 10 per cent.
1912----	14,000	2,330,000	Great Britain, 30 per cent; Italy, 25 per cent; United States, 15 per cent.
1913----	15,000	2,270,000	Great Britain, 30 per cent; Italy, 13 per cent; Germany, 12 per cent; Netherlands, 12 per cent; United States, 8 per cent.
1919----	11,000	1,980,000	Great Britain, 50 per cent; Italy, 18 per cent; United States, 15 per cent.
1920----	4,600	750,000	Italy, 70 per cent; United States, 15 per cent; Great Britain, 9 per cent.
1921----	4,400	760,000	United States, 40 per cent; Italy, 35 per cent; Great Britain, 8 per cent.
1922----	4,300	670,000	Italy, 50 per cent; United States, 40 per cent.
1923----	6,500	1,090,000	United States, 70 per cent; Italy, 20 per cent.

¹ Average value in 1923, 1 tael equals \$0.80 United States gold.

WALNUTS

Walnut trees are found scattered throughout many sections of the country. The greater production, however, is in North China. Walnuts are seldom a main crop. Owing to lack of economical transportation, the walnuts of Kansu, Szechwan, and Shensi, where they are grown in large quantities, do not reach the export market. A limited quantity of walnuts from Shansi, where they are very extensively grown and are of fine quality, reaches Tientsin for export purposes. The greater part of the export product is probably produced in Chihli Province. They are graded as double shelled, which

are the cheapest, owing to the difficulty of extracting the kernels; medium hard shelled, which constitute the bulk of the crop; and paper shelled, which seem to be confined to certain districts north-east of Tientsin.

The Chinese do not allow the nuts to ripen on the trees, but gather them a few weeks before they are actually ripe. They are piled in heaps on threshing floors, covered with straw, and hulled after a few days. Chinese buyers go about the country contracting for walnuts in advance. These dealers bring the nuts to the Tientsin market, where they are sold to the foreign exporters. Shelling, packing, and preparations generally for export purposes are done in Tientsin under the direction of the exporters.

The export trade in walnuts is a development of the past decade. In 1919, 13,100,000 pounds of walnuts in the shell and 5,500,000 pounds of walnut kernels were exported. In 1921, 14,800,000 pounds of walnuts in the shell and 3,480,000 pounds of walnut kernels were exported. Thus during each of these years there were exported from China the equivalent of 25,000,000 pounds of walnuts. This represents one-third of the American crop and but a fraction of the entire Chinese production. The larger percentage of China's exports of walnuts have gone to the United States. Customs returns show considerable exportation to Japan, but these were undoubtedly transhipped to the United States.

Owing to the imposition of a duty of 12 cents gold a pound on shelled nuts and 4 cents a pound on nuts in the shell by the United States tariff of 1922, China's exports to America have materially decreased since 1921. Yet, in spite of these high duties, China exported 3,200,000 pounds of kernels during 1922, and 2,600,000 pounds of kernels during 1923, 70 per cent of which went to the United States. In 1922, 4,000,000 pounds of nuts in the shell were exported, and in 1923, 3,800,000 pounds, 50 per cent of which went to the United States. The fact that this trade with the United States has continued, even at these proportions, indicates clearly the great difference in labor costs between the two countries.

WHEAT, FLOUR, AND BRAN

Wheat and flour.—There is a tendency in China to increase the consumption of wheat products. Many Chinese in the rice producing sections include wheat products, particularly noodles, in their dietary. In the regions of the north, which do not produce this cereal, rice is served at a feast as something special; whereas, in the southern regions which do not grow wheat, noodles are served as a savory dish. In other words, the commonplace dish of one section becomes the entrée at the feast in the other section.

It is difficult to estimate the wheat production of China. Through the economic section of the Chinese Eastern Railway in Northern Manchuria, and the South Manchuria Railway in South Manchuria, it has been possible to arrive at a fairly reliable estimate of the wheat production of Manchuria, which appears to be about 40,000,000 bushels (60 pounds to the bushel). Considering the vast quantities of wheat grown and consumed in Shantung, Chihli, Honan, Shansi, and Shensi, and the substantial quantities grown in the Provinces

bordering on the Yangtze River and in the south, it is probable that China's annual wheat crop would be between 300,000,000 and 400,000,000 bushels.

The American farmer and the American miller are interested to know if China is likely to become self-sustaining as a wheat producing and consuming nation, or an exporter of wheat. One of the problems which is inextricably interwoven in the solution of this question is economic transportation. At present Shensi Province and the region westward produce wheat at about one-third the cost of wheat production in the United States; but if the flour mills of Hankow had to depend upon that region for wheat, even at these prices they could better afford to make their purchases in Seattle; for the transportation rates from Shensi and West China bring the costs to a higher figure than for Pacific wheat landed in Hankow.

It may be that China will never become a substantial exporter of wheat or flour, although it is quite likely that with a shortage of wheat production in the world generally China may be a helpful source of supply. China's trade in wheat and flour is shown in the following tables:

Years	Exports of wheat			Imports of wheat
	Total	To Siberia	To Japan and Chosen	
	<i>Bushels</i> ¹	<i>Per cent</i>	<i>Per cent</i>	<i>Bushels</i> ¹
1910-1913 (average).....	4,000,000	98	2	24,000
1917.....	3,700,000	95	—	80,000
1918.....	4,000,000	25	70	—
1919.....	10,000,000	30	65	—
1920.....	18,700,000	19	25	75,000
1921.....	11,400,000	25	25	165,000
1922.....	2,500,000	90	10	2,000,000
1923.....	1,250,000	90	10	5,800,000

¹ Of 60 pounds.

² From Chosen.

³ In 1920, 40 per cent went to Port Said and 14 per cent to Great Britain; in 1921, 40 per cent went to Port Said and 8 per cent to Great Britain.

⁴ 90 per cent from United States.

⁵ From United States, 77 per cent; from Canada, 12 per cent; from Australia, 10 per cent.

Years	Exports of flour				Imports of flour
	Total	To Siberia	To Japan and Chosen	To Great Britain	
	<i>Barrels</i> ¹	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Barrels</i> ¹
1910-1913 (average).....	—	—	—	—	1,500,000
1917.....	586,000	75	—	20	500,000
1918.....	1,400,000	20	15	45	3,000
1919.....	1,830,000	12	50	14	200,000
1920.....	2,680,000	14	—	59	340,000
1921.....	1,400,000	22	26	—	410,000
1922.....	400,000	95	—	—	2,450,000
1923.....	90,000	70	30	—	3,800,000

¹ Of 196 pounds.

² In 1920, 8 per cent; and in 1921, 16 per cent went to Port Said.

³ The United States furnished 90 per cent in 1921, 80 per cent in 1922, and 70 per cent in 1923.

What appeared by the returns of 1919, 1920, and 1921 to be evidence of China's becoming an exporter of wheat and flour was merely a temporary situation: High prices abroad and the silver-exchange situation in China favored exports.

During 1922 and 1923 China suffered from poor crops of wheat and rice. Wheat prices abroad dropped and silver exchange favored imports, hence China, during these years, became an importer of wheat and flour. Siberia has proved to be China's steadiest customer for both wheat and flour. The United States was the source of the bulk of wheat and flour imports into China. There are no duties on wheat or flour imports into China, hence the trade can follow the natural law of supply and demand. It is interesting to note from the Chinese customs returns of trade that during 1923 there were imported into Manchuria from abroad 800,000 bushels

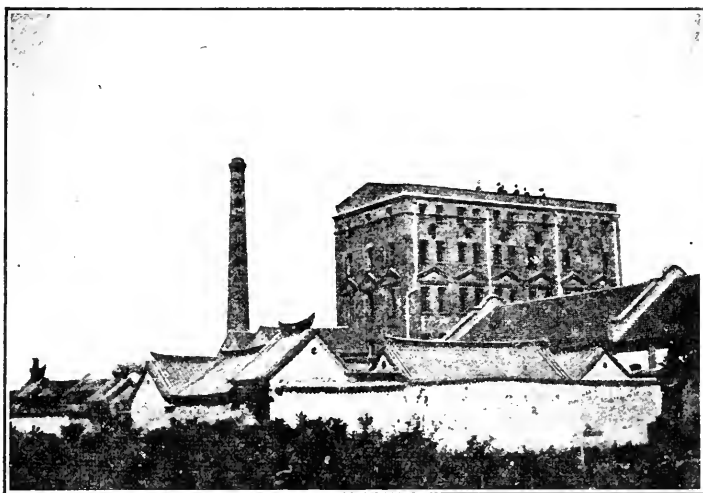


FIG. 9.—Modern Chinese flour mill fully equipped with American machinery

of flour valued at \$4,600,000. The Manchurian wheat harvest for both 1922 and 1923 was only about 50 per cent of normal, whereas the 1924 crop has been about 75 per cent of normal, or about 30,000,000 bushels. Imports of flour into Manchuria in 1922 were 680,000 bushels and in 1921, 83,000 bushels. Thus it is apparent that the consumption of flour among the 22,000,000 people of the three eastern Provinces of Manchuria is very high. Furthermore, Siberia has been drawing upon Manchuria's wheat and flour resources. Thus, unless the Manchurian wheat crop is good or prices elsewhere are abnormally high, Manchuria is not likely to have a surplus of wheat or flour for export to other sections of China.

The modern flour-milling industry has been developing substantially in China during the past two decades. The centers of the flour-milling industry in China in order of their importance in output of flour are Shanghai, Harbin, Tsinan, Tientsin, and Hankow. The Shanghai mills have an aggregate daily capacity of

32,000 barrels, Harbin 25,000 barrels, Tsinan 9,500, Tientsin 9,000, Hankow 3,000; or an aggregate of 75,000 barrels. It is probably safe to add 40,000 for the other mills scattered throughout the country, which would give us 115,000 barrels as a daily capacity. It requires about $4\frac{1}{2}$ bushels of wheat to make 1 barrel of flour, hence, if these mills ran 300 days in the year at full capacity, it would mean they would produce 35,000,000 barrels of flour, consuming about 160,000,000 bushels of wheat. The Chinese mills have not been able during the past few years to secure the supplies of wheat essential to running them at full capacity on a profitable basis. Short crops in China, poor internal communications, unfavorable political conditions, heavy internal tax exactions, the lack of any standard of quality in wheat production, the producing of small amounts of many different varieties in any one district, and the tendency of some growers and middlemen to water and adulterate their wheat, have all operated to the disadvantage of the milling industry.

The fact remains, however, in connection with China's flour-milling industry, that the bulk of the flour consumed by the masses is still ground between stones by the people in the country. The consumption of wheat products among the Chinese is increasing. With higher purchasing power through the improvement of economic conditions, the per capita wheat consumption is bound to increase. Railways will open up new lands for wheat cultivation, but it is not anticipated that China will become a regular exporter of wheat and flour. It appears quite likely that China will continue to import flour, but silver exchange, crop conditions in China, and prices of wheat abroad are essential factors in this trade.

The United States exports annually about 15,000,000 barrels of flour. China, in 1923, imported nearly 4,000,000 barrels, in addition to nearly 6,000,000 bushels of wheat.

Bran.—The development of the modern flour-milling industry in China naturally results in the production of considerable quantities of bran. The Chinese flour mills do not make an effort to produce a No. 1 baker's white flour. The middlings or shorts are not taken from the flour, which means also that the bran holds more of the wheat content. Since the country has no dairy industry, Chinese bran does not find a ready domestic market.

Prior to the European war, China exported each year about 75,000 tons of bran, some of which went to the Pacific coast. During the past five years the average exports of bran from China were about 175,000 tons, valued at 4,600,000 taels, which (with the tael valued at 80 cents gold) is the equivalent of \$3,500,000 gold. Dairen exported 30 per cent, Shanghai 25 per cent, Tsingtao 15 per cent, and Hankow 6 per cent. Japan takes practically all of China's bran. The United States tariff of 1922 prescribes a $7\frac{1}{2}$ per cent ad valorem duty on bran imports.

MISCELLANEOUS

In addition to the vegetable products mentioned there are others which enter into foreign trade and still greater numbers which are confined to domestic consumption. Mr. Walter T. Swingle, of the Bureau of Plant Industry of the United States Department of Agri-

culture, refers to Wu Ch'i Chun's great botany "Chi wu ming shih t'u K'ao," published in 1848, containing beautiful full-page illustrations of 1,714 economic plants. Explorers from the United States Department of Agriculture have discovered in China fruits, nuts, and other economic plants which are adding materially to the economic wealth of the United States. Some of these are:

Chinese jujube.—These are the so-called Chinese dates, which are grown extensively in the drier regions of the north. They are put through a special process of drying and sweetening, in some cases with honey, thereby producing a delicious flavor. Chinese jujubes are now being grown in California.

Persimmons.—China produces a great variety of persimmons, some of which are seedless. They are consumed both in the fresh and in the dry state. The fresh varieties in North China are refrigerated in the open air during the long, dry, cold winters of the north. Mr. Dorsett, of the United States Department of Agriculture, has found six to eight millions of these persimmons, stacked six high, on platforms in the open air along the sides of river beds, with ventilating ditches beneath and covered over with matting, suggesting the idea that the Chinese persimmon, as now being produced in the United States, can be improved through refrigeration, which will also help its marketing possibilities.

Chinese chestnuts.—This variety, which resists the chestnut-bark disease and which is larger than the American chestnut, is being successfully introduced into the United States.

Red hawthorne.—The beautiful, large-fruited, red hawthorne of North China produces jellies and preserves which might find an acceptable place in the American dietary.

Litchi.—This fruit, which is commonly known in America as the China nut and which is grown in southern Provinces, is particularly delicious when served fresh. Seedless varieties exist. The fruit is well adapted to canning and its introduction into the United States is viewed with interest.

Citrus fruits.—China produces a great variety of pomeloes and oranges. The pomelo is somewhat different from the grapefruit. The small, sweet, juicy, seedless varieties are distinctly popular among the Chinese people and may find a place in the United States. A few years ago the orange crop of Florida was saved by securing from China the seeds of the wild orange indigenous to that country. It is possible that the stock from which was developed the Washington navel orange, which constitutes a large per cent of the California orange crop, originated in China.

Apricot kernels.—One of the interesting articles of export from China is the edible apricot kernel, which is similar to the American almond. It is produced in North China and exported from the port of Tientsin. Exports during the three years 1921-1923 averaged 3,000,000 pounds.

Pears.—China produces a great variety of pears, which are indigenous to the country. A few years ago the Bartlett pear crop of the Pacific coast was threatened with destruction by a blight. Specialists from the Department of Agriculture went to China, secured tons of seed of the Chinese wild pear, and with this hardy stock saved the Pacific coast Bartlett-pear industry.

Velvet bean.—The Chinese velvet bean, introduced into the Southern States but a few years ago, has already demonstrated its value.

Bamboo sprouts.—The Chinese have in bamboo shoots a valuable vegetable product. In addition to the food value of the sprouts, the bamboo industry offers much in other directions. In China, bamboo is used for fences, mats, furniture, hats, sieves, screens, bird cages, lunch baskets, traveling bags, penholders, pipes, brooms, carrying poles, scaffolding, piping, cooking utensils, musical instruments, and for many other purposes. It possesses a remarkable tensile strength in proportion to its weight.

Cassia.—*Cinnamomum cassia* is a useful tree found in the borders of Kwangtung and Kwangsi Provinces. The bark of *Cassia lignea* is allowed to lie for 24 hours for fermentation, and the outer skin scraped off. It dries in a quilled shape. This dried bark is less pungent and acrid than cassia oil. Cassia oil, which is obtained from the leaves and twigs by distillation, is used in medicine, also in perfumery and flavoring condiments. China exports annually about 5,500 tons of *Cassia lignea*, valued at nearly \$500,000.

Ginger.—Ginger is grown in the West River region and hilly districts of Kwangtung and Szechwan Provinces. The preserving of ginger is an industry of Canton. China's exports of ginger, fresh and preserved, amount to about 6,000 tons a year, valued at about \$250,000. Galangal is sometimes mistaken for ginger proper. The root is smaller than that of ginger. It is cultivated in the island of Hainan and off the Kwangtung coast. It is also used as a preservative and often takes the place of ginger. China exports about 450 tons of this product a year.

NATIVE MANUFACTURED PRODUCTS

In this section are included only those commodities which are a part of the domestic handicraft of the old economic order rather than of the new. Such articles as beads, old tapestries, brasses, carved jades and ivories, lacquer, and wood carvings are omitted as being of no great consequence in the volume of trade between China and the United States.

China is still a source of supply of many articles that are valued because of their individual handicraft characteristics. Standardization and quantity production have not developed in the making of these articles. With the primitive agricultural conditions and small farm holdings which exist under the family system, the great bulk of the farming people—men, women, and children—frequently have spare hours which they may devote to other crafts than that of tilling the land. Even a few cents a day in extra earnings constitute a welcome addition to the meager family income. Economic conditions are still such in rural communities that in these products of the hand China can successfully compete with the machine-manufactured products of the Orient. This accounts for such (in the aggregate) important domestic industries as the making of hair nets, firecrackers, hats from grass and rushes, laces and embroideries, braids, mattings, and many similar articles well known to commerce, that are almost invariably the production of the spare-moment workers in the homes of the people, rather than the output of factories.

CARPETS AND RUGS

Rug weaving in China dates back many centuries, though it was not until the World War that Chinese rugs and carpets were introduced in quantity into American markets. Like all oriental rugs, Chinese rugs are handmade, but the process differs from that of western Asiatic countries.

Chinese rugs are made of knotted pile wool on a cotton warp, which is stretched upon a heavy wooden frame set up in the house. The design is painted with black ink on the warp, and the master craftsman sketches in his colors on white paper. Then small boys literally build the rug from the ground up, working in the colors, as the pattern demands, with the yarns, which have been dyed either with native vegetable dyes or with imported artificial dyes. Generally the rug-making establishments are native houses only large enough to accommodate a few frames. The wool pile as it is knotted about the cotton warp is clipped with scissors and is frequently trimmed down so closely as to make details in the design stand out as though carved.

The quality of the rug is determined by (1) the quality of the wool used, (2) quality of the dyes, (3) fineness of texture, depending on the number of knots to the square inch, and (4) character of workmanship. Prices vary, in accordance with the variations in these qualities, all the way from \$0.90 to \$4 silver per square foot. In Tientsin a modern American spinning mill has been installed, where standardized machine-spun wool is made and dyed; but until quite recently all Chinese rugs were woven of hand-spun wool.

The exports of carpets or rugs from China for 1923, 90 per cent of which went to the United States, were valued at about 5,000,000 taels, or \$4,000,000 gold.

In making purchases of carpets or rugs from China, American importers find it impracticable to deal directly with the native manufacturers, as the carpets and rugs are made in hundreds of small establishments. This necessitates making purchases through properly accredited exporters at Tientsin, Peking, or Shanghai. The exporters will guarantee quality and workmanship and will attend to the details of inspection, packing, and shipping.

The United States tariff of 1922 imposes a duty of 55 per cent ad valorem on oriental rugs and carpets.

CHINAWARE AND PORCELAIN

Although China gave to the world these two products, yet the industry in China is not in the flourishing condition which marked its position during the days of the monarchy. Imperial patrons did much to encourage those who took a pride in the production of their porcelains. There were a number of imperial potteries in China, the principal one of which has been located at Kingtehchen, in Kiangsi Province, since the year 200 A. D.

Americans visiting China often become charmed with the beautiful Canton chinaware. It is difficult, however, to make satisfactory purchases, owing to the limited supplies and apparent lack of enterprise in the industry. China produces high-quality kaolin and clays, and hence possesses not only the skill but also the raw material for a

ceramic industry of great economic value to the country. Internal disorders, traditionally conservative ideas of the professional potters, and lack of organized capital militate against the development of a modern chinaware and porcelain industry. These conditions, however, will not last always. China is sure to become again an important factor in the ceramic trade and production of the world. At present the exports in chinaware and porcelain amount to about \$3,000,000 gold a year, of which 40 per cent goes from Canton, 40 per cent from Kiukiang (near Kingtehchen), and 20 per cent from Swatow. The exports of chinaware declared at Chinese ports as destined to the United States in 1923 showed a value of \$129,000.

EMBROIDERIES

From time immemorial China has been noted for its beautiful embroideries, mostly on silk. Hence it was not difficult to introduce into China the modern embroidery industry. The industry is confined to handwork. At Canton considerable quantities of embroidered dress patterns and lingerie are produced. In fact, this industry centers at Canton, as does also the making of the famous Canton silk shawls produced after the fashion of those introduced from Spain. Swatow embroidery is confined to grass cloth and linen, and Swatow may be spoken of as the center of grass-cloth embroidery. Peking is the center of the Chinese-style silk embroideries, including Mandarin coats. Shanghai is the transshipping and export center for the larger portion of Chinese embroideries.

The customs returns of trade for 1923 show silk embroideries worth 900,000 taels exported from China, 95 per cent of which went from Canton. The export returns for China as compiled by the American consulate general at Shanghai show the value of exports of laces and embroideries to the United States for the year 1922 as \$2,800,000 gold and for 1923 nearly \$2,000,000 gold. So much of this business, however, is transacted through parcel post that it is difficult to estimate its actual value.

FIRECRACKERS

China invented gunpowder and popularized firecrackers. The cheapest kind of firecracker is made of gunpowder rolled in coarsely made bamboo paper, and covered with red paper, red being regarded by the Chinese as significant of happiness and good fortune. Alum is used to neutralize the smoke. Nanning, in the Canton district, is the center of the industry. Firecrackers are for the most part shipped to Hongkong, thence to other countries. The Chinese seem to use firecrackers upon every occasion—to speed a parting guest, in wedding celebrations, on festivals and birthdays, and to dispel evil and bring good omens. China exports about \$2,500,000 (gold) worth a year. Canton sends directly to the United States about \$350,000 (gold) and Hongkong \$150,000 worth of firecrackers annually. The United States tariff of 1922 imposes an import duty of 8 cents a pound, including weight of wrappers.

FURNITURE OF RATTAN, REED, AND SEA GRASS

These products are for the most part shipped from Hongkong, where the industry is more largely developed than in any section of

China. Easy shipping facilities for a light but space-consuming cargo, also lack of export duties and proximity to the markets for raw materials, give Hongkong a distinct advantage in this industry, despite higher costs of labor and of living than obtain in most places in China. Consul Leroy Webber, Hongkong, reports that \$1,000,000 (gold) worth of rattan furniture was exported from Hongkong during 1922, and that America took fully 50 per cent, the exports of the United States having increased 40 per cent since pre-war years. Rattan furniture is handmade, and prices are fixed semiannually by local manufacturers and exporters, the goods being sold on terms, cash against documents.

The wholesale furniture prices, according to Consul Webber, averaged at Hongkong \$4 (Hongkong currency) a piece, about \$2.25 (U. S. gold), which was about 20 per cent higher than pre-war prices. During 1923 the exports from Hongkong netted \$730,000 (gold), which was a decrease from exports of the previous year. The United States took 45 per cent. The decrease in exports is attributed to increased costs of 10 to 20 per cent on wholesale prices as a result of labor strikes and to the increased rates of the United States (1922) tariff, which imposes duties as follows: Rattan and reed furniture with frames, 60 per cent, and without frames, 45 per cent; sea grass furniture with wooden frames, 60 per cent. Rattan canes, reed, and sea grass are admitted duty free to encourage American domestic manufacture of furniture and other articles made of these products. During 1923 sea-grass furniture valued at \$247,000 (gold) was exported from Hongkong to the United States. According to the statistics of the United States Department of Commerce, the United States during 1923 imported \$1,520,000 worth of rattan and \$758,000 worth of chair cane or reeds. Hongkong exported to the United States \$107,850 (gold) worth of rattan and \$53,600 worth of reed, aggregating about 50 per cent more than the previous year.

HAIR NETS

After the revolution of 1911 queue cutting in China gradually spread over the country. In some sections the queue is no longer worn, while in other sections the parting with this emblem of loyalty to the Manchu régime is proceeding more slowly. Thus one of the by-products of the change from a monarchical to a republican form of government is a considerable export trade in human hair. During the past five years this has amounted to about \$700,000 (gold) a year. In 1923 the exports were 4,000,000 pounds valued at about \$800,000. Shanghai and Canton are the principal export points.

The Chinese customs show about 30 per cent each exported to Hongkong, Japan, and the United States. It is possible that the ultimate destination of both that exported to Japan and that to Hongkong was the United States—at least it is certain that the United States took 75 per cent of the whole trade.

The hair-net industry developed as the result of cheap labor and a plentiful supply of human hair. The hair continues for the most part to be exported abroad, where it is bleached and chemically treated to soften it, and then returned to China. The manufacture of hair nets was begun before the war by the Germans in Shantung Province, and Shantung has maintained its monopoly in this in-

dustry. Efforts were made to develop it in Canton, but labor costs there could not compete with costs in Shantung. The industry reached its climax in 1921, when China exported about \$10,000,000 (gold) worth of hair nets, the bulk of which went to the United States. With the bobbing of hair in the United States the trade has since declined. Exports of hair nets from China in 1923 and 1924 dropped to less than half those in 1921. Should the custom of bobbing the hair be discontinued, it is possible that the industry may regain its former position.

Nets and netting of human hair pay a duty of 35 per cent ad valorem under the United States tariff of 1922.

HATS

At Ningpo, south of Shanghai, there has developed an interesting industry in the manufacture of rush hats. The sedge from which these are made was originally wild, but is now cultivated, somewhat after the fashion of rice. After being cut the plant is carefully dried in the sun for a week or 10 days and must be protected from moisture, as dampness discolors it. There are several thousand people engaged in the industry, most of whom are women. From 1910 to 1913 the average number of these hats exported from Ningpo was 6,000,000. In 1922 there were 10,200,000 exported, and in 1923, 8,600,000. Seventy-five per cent of these went to the United States, where for the untrimmed and unblocked hats a duty of 35 per cent is paid.

LACE

Foreign missionaries in China are responsible for the development of the lace industry among women and girls in certain sections of the country. It is centered for the most part at Chefoo, Shanghai, Ningpo, and Swatow. Assistant Trade Commissioner A. Viola Smith states that Pootung, in the vicinity of Shanghai, and Wusih, 75 miles north of Shanghai, are the filet lace centers. Swatow has become prominent as a center for Irish lace, although filets are made also in Swatow. A small amount of Venetian or mosaic lace is made in the Shanghai district. Miss Smith reports that the Irish-lace industry was introduced into Swatow in 1920 and that it has succeeded in producing an article equal, if not superior, to the laces originally made in Ireland. This lace is produced by crocheting designs with a small steel needle.

The net or mesh which is used as a basis of filet laces is handmade and is produced principally in the Ningpo district. The nets are collected by agents, who carry them to the lace-making districts, where skilled workers embroider the patterns. The threads for these laces are imported and are furnished to the workers by native brokers, dealers, or buyers, who pay the laborers upon collecting the finished product. According to Miss Smith, the Shanghai scale of wages runs from 8 to 15 cents silver a day (in gold approximately one-half these rates). The filet laces are purchased upon the basis of the number of mesh holes to the width of the lace, in contrast with the number of bobbins in torchon and Cluny laces. If the price of $1\frac{1}{2}$ cents per hole is stipulated and the lace is 20 holes wide, the price per yard would be 30 cents.

Native brokers tour the lace districts and buy the laces, which they dispose of to the exporting concerns, where the products are given a rigid inspection and graded into three classes. They are then measured, carded, and labeled for shipment. The customs returns for lace exports probably do not cover the entire quantity, for the reason that considerable amounts are sent by parcel post and considerable purchases are made by travelers. The customs returns show the exports of lace from China as amounting to about 5,000,000 taels a year (\$4,000,000 gold). Seventy-five per cent of these exports are taken by the United States; Australia, Canada, and Great Britain take the remainder. Shanghai is the principal port of export, with Swatow, Ningpo, and Chefoo also listed in the trade. The United States import tariff of 1922 imposes a duty of 90 per cent on most laces.

MAH-JONGG SETS

The Chinese game "mah-jongg," or "sparrows," as it may be translated into English, rose in popularity in the United States to such proportions that during the year 1923 mah-jongg sets from China to the value of \$1,500,000 gold were shipped to the United States. The exports for 1924 will probably be at least \$1,000,000. This trade is practically all from Shanghai, as the bulk of the mah-jongg sets for export are manufactured in the Shanghai district. It is estimated that, including the sets taken by tourists and travelers and those sent to other countries as well as to the United States, China's exports of mah-jongg sets for 1923 probably netted the equivalent of \$2,000,000 gold. It is anticipated that with the year 1925 the business will show a distinct decline. The popularity of the game in the United States appears to be on the wane, and imitation sets in the United States can be made at a lower price than the bone and bamboo sets of China.

Mah-jongg is not a game of remote origin or antiquity, but is a development of comparatively recent times. Mah-jongg sets are made of bone, ivory, ebony, pyralin, or bamboo. The ivory and ebony are imported from India or Siam, and the pyralin from Japan and the United States. Some of the bone is of domestic origin and part is imported from America (the shin and leg bones of cattle). The bamboo is all of domestic production. The importation of bones from the United States for the mah-jongg industry in China rose to such proportions in 1923 as to require the bones of about a million cattle.

The tiles, as manufactured in China, are $1\frac{3}{8}$ by $1\frac{1}{8}$ by $\frac{1}{16}$ inch. Quality in the bone and bamboo sets is determined by (1) quality of bone and of bamboo; (2) workmanship, especially in making the joint; (3) polish; (4) depth and care of carving of symbols and number; (5) coloring or painting of symbols and numbers.

A complete set consists of 144 tiles (and 4 blank tiles), 120 counters, 4 place disks, and 4 dice. The cases, as made in China, vary from ordinary wood or tin boxes to small cabinet cases of wood or leather. Prices vary from the equivalent of \$1 gold for sets of all-bamboo tiles to \$4 for cheap bone and ivory, \$25 for pyralin, and \$75 for ordinary ivory sets. Cabinets range in price from \$1 up.

Mr. Emens, in a report on the subject, estimates the cost of labor in Shanghai, in making a medium-price set, at \$6.30 silver (approximately \$3.15 gold), the process involving 21 distinct operations, with 10 additional operations in making the small wooden cabinets.

MATS AND MATTING

In the lowlands of southern Kwangtung there is a grass (*Arundo mitis*) which is planted from seed late in the autumn and, after attaining a height of 5 to 7 feet, is harvested in July and August. It is a three-cornered reed, which after harvesting is stripped by women and children and is dried in the sun. The dried reeds are disposed of in the open market, where they are purchased for use in manufacture of mats and matting. Preliminary to weaving on crude native looms the reeds are sorted according to quality and size, and sometimes dyed. The warp is hemp string. The reed forming the woof is put through by hand without a shuttle. Unfortunately, these looms are not capable of being adjusted to changing demands in markets abroad; otherwise the industry would have witnessed far greater developments in trade with the west. Shipments of mats and matting are made to South Sea countries through Hongkong. The trade with America shows signs of reviving. The exports of matting from Canton to the United States in 1923, as declared at the port of Canton, were valued at \$508,000 gold, compared with \$157,000 for 1922. Canton's exports of mats and matting in recent years were as follows:

Years	Mats		Matting	
	Number	Haikwan taels	Rolls	Haikwan taels
1910-1913, average.....	24,200,000	2,600,000	336,000	2,600,000
1919.....	27,200,000	1,870,000	125,300	1,040,000
1920.....	29,400,000	2,350,000	184,000	1,600,000
1921.....	19,300,000	2,150,000	98,750	784,000
1922.....	24,900,000	3,885,000	231,400	1,800,000
1923.....	20,800,000	2,916,000	180,500	1,588,000

The Chinese customs returns show no exports from Canton to the United States, but there were invoiced at the consulate general at Canton the amounts as above specified, which went through Hongkong for transshipment to the United States. The United States import tariff of 1922 imposes a duty of 3 cents a square yard on Chinese mats and matting.

PAPER

The paper industry of China, like many other native industries, is in a state of transition. Modern paper manufacture has not yet become a success, principally owing to the lack of raw materials adaptable to modern machine methods. Economic conditions in China do not permit the accumulation of large quantities of rags, nor is the country possessed of accessible resources of wood pulp.

China is supposed to be the first nation to have produced paper. The crude process of manufacture has been carried down through

many centuries. The principal materials used are rice straw, bamboo, hemp, and mulberry. The paper-mulberry tree, or "kou shu," according to Wilson, occurs all over China up to 4,000 feet in altitude, and if left alone forms a much branched tree 35 to 40 feet tall, with a smooth, dark-green bark. In the bush form it is abundant by the wayside and on cliffs. Rice straw produces the most common paper used in China. It is sometimes mixed with the stems of a reed known by the Chinese as "mao-ts'ao," which is also used in paper manufacture. Bamboo is used for making better-class papers which will carry ink. It is also used for window paper and abundantly for other purposes. The so-called "rice paper" of China is in reality produced from the pith of a shrub (*Fatsia papyrifera*). This paper is used in the manufacture of artificial flowers and by Chinese artists.

In the customs returns paper is classified as first quality, second quality, and joss paper. The exports of first quality average about 5,000 tons, of the second quality 6,000, and of the joss paper 5,000 tons annually.

Nearly all of this paper is destined for use by the Chinese populations abroad.

PONGEES

Pongee, or Shantung silk, is produced from the fiber of the so-called wild cocoon, or the cocoon which feeds on oak leaves instead of mulberry. This gives the silk a peculiar natural color and greater strength but less luster than that produced by the mulberry-fed cocoon. These cocoons are produced in Manchuria, where Antung is the center of the trade; in Shantung, where Chefoo serves as the port of export; and in Szechwan, where Chungking is the center. China's exports of pongee during the years 1919 to 1923 have fluctuated between a valuation of 7,500,000 and 13,000,000 taels. The exports for 1923 were about 7,800,000 taels, equivalent in United States gold to \$6,240,000. Of this quantity the United States took 25 per cent, Hongkong 22 per cent, Great Britain 20 per cent, British India 10 per cent, and Spain 8 per cent. Chefoo is credited with about 75 per cent of the export trade. Hankow 15 per cent, and Tsingtao 5 per cent. The United States tariff of 1922 admits raw silk duty free, but imposes a duty of 55 per cent ad valorem on imports of silk pongee.

The United States Department of Commerce Trade Information Bulletin No. 283 of November, 1924, entitled "International Trade in Raw Silk," contains much interesting data regarding the silk trade of Japan and China with the United States.

STRAW BRAID

From the standpoint of modern economics, the Chinese might be considered a wasteful people because of their ignorance of the meaning of modern economics and because of their lack of organization. They do not, as individuals, intentionally permit anything to go to waste. Of interest to Americans is the combination of the by-product of their wheat and of their farm labor, which has been developed in certain sections of Chihli and Shantung Provinces as the straw-braid industry. After the wheat harvest, while awaiting

the ripening of the fall crops, men, women, and children strip, cut, sort, bleach, plait, and join together the wheat straws, and bundle their products ready for the small buyers who go about collecting them to offer to the larger purchaser. Eventually the product finds its way to the foreign export merchants at Tsingtao, Tientsin, or Chefoo, from whence it is shipped abroad for final bleaching. It then enters the markets of the world, principally for manufacture into straw hats, but also for fancy mats, workbaskets, and other articles. It is purchased from the native workers by the Chinese foot (equivalent to 14.1 English inches). It is bought in lengths varying from a few feet to several yards. According to the Far Eastern Products Manual, it is sorted and standardized as to quality, and made into pieces of 30, 60, or 120 yards in length, then rolled, cased, and baled ready for shipment. An ordinary bale contains 240 pieces, but the split braid and the more expensive qualities are packed in cases of 480 pieces.

China's exports of straw braid for 1923 amount to 11,200,000 pounds, valued at 5,444,000 taels, or \$4,355,000 United States gold. The United States took 30 per cent, Japan 30 per cent, Great Britain 16 per cent, Germany 10 per cent, and France 8 per cent. The exports for the year 1922 were about the same in quantity and distribution. Exports for 1911, 1912, and 1913 were, respectively, 17,000,000, 16,000,000, and 14,000,000 pounds. Sixty per cent of China's straw braid is exported from Tientsin, 30 per cent from Tsingtao, and 4 per cent from Chefoo.

The United States tariff of 1922 imposes a duty of 15 per cent ad valorem on straw braids not bleached, colored, dyed, or stained, and 20 per cent if bleached, dyed, or stained.

UMBRELLAS

The Chinese umbrella with bamboo frame, covered with oiled paper on which are painted flowers or landscapes, has become popular in the American market. During the past few years the Chinese exports have averaged about 5,000,000, valued at \$800,000 gold. Foochow and Canton furnish this trade, over half of which goes to the United States. The United States tariff of 1922 imposes a 45 per cent ad valorem duty on painted paper umbrellas, in part of bamboo.

VERMICELLI

For want of a better name, Chinese flour strings are designated by the Maritime Customs as vermicelli and macaroni. Strictly speaking, these terms do not apply to the Chinese-manufactured flour strings or noodles, for they are solid rather than of pipe form. In the southern part of China the proportion of flour strings and noodles to the other flour products is higher than in the north. It is estimated that wheat-flour noodles and flour strings constitute no more than 50 per cent of the entire flour consumption in northern China, where flour products are consumed rather than rice. Flour strings are also made of beans and rice, and sometimes the latter are mixed with sweet potatoes and kaoliang.

The only flour strings, however, which enter into China's foreign trade are those produced in the northwestern section of the Shantung

promontory at Lungkow and Chefoo. These are made of small green beans, rich in starch content, imported from Manchuria. By a process of boiling, the skin is separated from the meat, after which the latter is ground, cooked in cloth bags, and sun dried. It is then crumbled into powder, mixed with water, and beaten into a gelatinous mass, after which it is placed in boiling water, and later the starchy mass is mixed with pulverized bean meal and kneaded into a dough. The dough is then thrown into a colander which is held over boiling water, and the strings, as they are forced through the holes, drop into the water. After this process they are taken out, placed upon a frame and given a further stretching, and then dried in the sun. These strings are from 15 to 25 feet in length. They are then ready for the market.

The Cantonese prize the Lungkow bean-flour strings very highly. The exports from Lungkow and Chefoo amount to 17,500 tons a year, valued at about \$2,400,000 gold, and are all sent to Hongkong, and thence they are exported to Cantonese populations in South China, South Sea colonies, Philippines, and other places.

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MODERN CHINESE INDUSTRIES

BY COMMERCIAL ATTACHÉ JULEAN ARNOLD

The Chinese are often spoken of as a nation of shopkeepers. This expression is likely to be misleading, for the retailer in China is often the manufacturer of the goods he places on sale. The ordinary Chinese city is a beehive of industry. Numerous small retail shops line the thoroughfares, and in many of these shops the goods offered to the public have been manufactured by the establishment. China is still essentially a land of domestic handicraft, primitive agricultural methods, and individual rather than corporate business. The farmers till their small holdings from their villages, and they or parts of their families engage also in some other productive enterprise in the nature of household handicraft. Often in addition to the weaving of cloth on hand looms other articles are produced solely for marketing. Among such wares are straw braid, hair nets, hemp string, and bamboo or reed mats. There are no clear demarcations between the farmer, the manufacturer, and the business man, although there are those who devote the bulk of their time to farming, some who are industrial laborers, and some who concern themselves only with trade. That the ordinary craft and trade guilds are merged into single organizations for employers and employees indicates the close relationship between industry and trade.

In most Chinese cities a number of blocks on a street—sometimes a whole street—are given over to a certain industry, the street or quarter of the town taking the name of the industry. The shops are generally small, about 12 feet in width, and often have the whole front open upon the street. They usually are 20 or 30 feet deep, with a bit of open space or courtyard behind and with living quarters above. Often the whole family, which always includes children and sometimes relatives, lives here. The apprentices, when the establishment carries any, live with the family. A dog, a few chickens, and a pig may also be part of the household. If the establishment is large enough to employ additional labor, the laborers are generally fed as part of their remuneration. If the articles made by the family are finished products, they are retailed in the shop. As a rule, shops which complete articles only in part occupy back streets, or the work is done in households which present no appearance of shops.

The family being the unit in Chinese society, industry and trade are, for the most part, family affairs. The American in a Chinese city marvels at the large number of small shops adjoining one another, making and selling the same lines. He is puzzled to understand how these numerous small shops, independent of each other, can exist with the severe competition which they must offer one another. The answer is found in the trade and craft guilds,

which grew up as necessary institutions of protection for these small producers and retailers. The guild is about the only coordinating element which industrial and mercantile China has developed. It has made possible the perpetuation of a system which otherwise would be fraught with ruinous competition. The breakdown of the partitions between the numerous small concerns and the substitution therefor of great organized establishments, amassing in larger quantities capital, raw materials, and mechanical devices, ushers in the elements of a modern organized economic society.

CONDITIONS ESSENTIAL TO INDUSTRIAL DEVELOPMENT

China is now at the inception of this transition. The replacement of the domestic handicrafts by modern industrial plants will require a certain measure of time. It will be attended with less friction if not unduly hastened. Some of the conditions essential to this development are:

1. Stable political conditions to insure capital reasonable safeguards against the depredations of brigands or rapacious military organizations. That the internal disturbances of the past few years have not more seriously affected China's trade is due to the absence of a highly organized economic society with its huge concentrated sums of capital in plant equipment. The extensive foreign interests invested in China are safeguarded by being mostly in special areas designated as concessions, or in international settlements which enjoy the protection of foreign, or partially foreign, administration.

2. There will have to be a distinct line drawn between Government and private enterprises, and the latter must be assured immunity against undue interference from official sources. The participation, since about 1890, of Chinese Government officials and certain Government departments interested in direct or personal promotion of industrial and commercial projects has been prejudicial to the encouragement of private enterprises, although to them must be given credit for inaugurating some of the large modern industrial projects. But when applied to business enterprise, the same loose methods which have characterized official administration have resulted disastrously in many cases, and most of the projects have not been attended with financial success.

3. Institution of a body of laws and the machinery of judicial administration adequate to insure stockholders protection against unscrupulous promoters and manipulating directors or managers. There is needed in China a larger understanding of the responsibility of trusteeship in corporate enterprise.

4. Reforms in the system of internal taxes upon trade, so as to relieve industry of impositions which tend to throttle its development.

5. Willingness on the part of Chinese capital to await dividends until the industry has had an opportunity to put itself upon a solid foundation. In China instances are not uncommon in which newly promoted projects have declared dividends from capital advances. A still more common but equally disastrous practice is that of paying out all net profits in dividends, with no consideration for depreciation, repairs, maintenance, or emergency demands.

6. An adjustment of the responsibilities of the members of a family to their relatives, in order to overcome the vicious practice of

padding the pay rolls of corporate concerns with nonproductive units; the substitution of individual for group responsibility, using group in the family sense.

7. A change upon the part of the Chinese public toward the institution known as "face," which discourages young men of education from engaging in pursuits involving manual labor or from accepting positions of a subordinate character; in other words, the recognition by society that a young man may start at the bottom of the ladder and work up without entailing loss of "face."

8. An adjustment in the trade and craft guilds that will admit of graduates of educational institutions qualifying as assistants in industrial and commercial organizations without encountering the opposition of the guild apprentice system.

9. The development of vocational education to train men in the applied sciences, to furnish an educated personnel capable of supplying the technical skill and supervision necessary to the success of modern corporate industry and business. China suffers from a surfeit of academic environment. Chinese students in American colleges are constantly criticized because of their ultraacademic attitude toward their work. They need more contacts of a distinctly practical nature.

10. Improvements in internal communications, particularly in the vast regions out of contact with waterways.

11. The creation of the necessary machinery of finance for assembling the capital essential to corporate industry and commerce. China possesses much actual wealth, but a large proportion of it is not productively employed. There are reputed to be hundreds of millions of dollars of silver in the interior of the country buried for safe-keeping. Usury also cripples Chinese industry. Banks, for the encouragement of commercial and industrial development, and bond and trust companies, for the handling of securities representing investments of surplus capital in productive enterprise, are imperative necessities.

CORPORATE INDUSTRY

Fortunately the Chinese are learning to appreciate the handicaps which militate against successful corporate enterprise, and are deeply interested in ways and means of correcting their shortcomings. Already a number of successful corporate industries have appeared on their horizon. It is a mistake to assume that because they have not already developed the counterparts of modern economic society the Chinese are incapable of making a success of organized commerce and industry. They have shown themselves to be possessed of much business ability; have demonstrated through the guilds their capacity to work together in an organized way; are by nature industrious; possess good mechanical instincts; are endowed with the heritage of a rich civilization, which carries with it sound ethical ideals; are keenly alert to the advantages of education; have remarkable physical endurance, as demonstrated by their ability to hold up under distinctly adverse and trying conditions; and possess a cheerful temperament, with a sense of humor and reasonableness. They are of a philosophical temperament, and the time element is not as yet a matter of concern to them in the sense that it influences

the conduct and attitude of mind of the westerner. But this may be accounted for in part by the fact that the nation has not yet been keyed up to factory schedules or railway time-tables. Even under the unfavorable conditions which have existed in China, Chinese capital and energy have done much toward the development of modern industrial plants and corporate business houses, the latter including a very considerable number of modern banking institutions.

The larger number of the Chinese enterprises of a corporate nature, however, are located in treaty ports, in close contact with similar organizations financed and controlled by foreign interests. It has been often stated that Chinese capital prefers to operate under foreign incorporation. It is true that Chinese abroad—some, in reality, the citizens or subjects of other countries—do, as a matter of preference, frequently operate business enterprises in China under foreign incorporation.

China has a corporation law, but it is incomplete and is inadequately administered. If a group of Chinese wish to organize a corporate enterprise they may make application through the local magistrate for registration, setting forth in the application particulars as to capital, nature of business, names of directors, and a list of shareholders with the stocks held by each. The magistrate, after investigation, transmits the application to the provincial industrial bureau, which in turn passes it on to the governor, who transmits it to Peking—to the Ministry of Agriculture and Commerce, if a business or industrial enterprise; to the Ministry of Finance, if a banking corporation; or to the Ministry of Communications, if a railway or communication project—where registration is effected. A registration fee is paid upon the basis of the capital stock, and no further corporation taxes are assessed, nor are any annual statements or other reports called for.

ENCOURAGEMENT BY GOVERNMENT

In order to encourage the manufacture in China of foreign-type products, the Chinese Government grants to factories and mills, foreign or Chinese, in China, which manufacture articles falling under the category of nonluxuries, privileged treatment whereby these products pay a single duty once and are thereafter free from any further taxation. Foreigners, in accordance with their treaty rights in China, are privileged to incorporate and to operate in China under the laws of their respective countries, and so are exempt from the jurisdiction of Chinese laws and courts. Thus, an American or any foreign company may incorporate under the laws of its own State, erect a factory in any one of China's treaty ports or trade marts, employ Chinese labor, and operate under considerably more advantageous circumstances than can the Chinese themselves.

JAPANESE INTERESTS

It is significant that within the past few years much Japanese capital has been invested in new industrial projects in China. The Japanese Government encourages Japanese business establishments in China by permitting tax exemptions to the amount invested in

real property in the country. Japanese cotton mills and Japanese factories are multiplying rapidly, being installed with the idea of taking advantage of the better labor conditions, better sources of supplies of raw materials, and superior markets for the finished products obtaining in China over those in the home country. The most noteworthy contribution made by the Japanese during their occupation of Tsingtao was in the development of manufacturing industries at that port and along the Shantung Railway. This region is particularly favored for industrial purposes. It has one of the best harbors in China; economic transportation tapping a rich, populous region; a plentiful supply of cheap labor; a climate well adapted to factory conditions; and cheap, easily accessible coal and iron ore. A customs report states that along the Shantung Railway Japanese capital, exceeding 50,000,000 yen, is invested in 200 factories representing 60 different lines of manufacture, among the principal industries being cotton mills, iron foundries, cement mills, peanut oil mills, salt refineries, match factories, egg albumen and yolk factories, cold-storage plants, flour mills, breweries, silk filatures, and brick and tile factories.

In South Manchuria, in the leased territory of Kwantung and in the railway zone, probably several billion of yen have been invested under Japanese auspices in industrial and commercial projects, including the South Manchuria Railway and its extensive ramified interests. The Anshan Iron and Steel Works and the Fushun coal mines, which are under the control of the South Manchuria Railway, represent capital outlays aggregating more than a hundred million yen. The bean oil industry of Manchuria represents also extensive Japanese vested interests. One of the great advantages which industry and trade enjoy in that region is the freedom from likin or internal tax exactions on goods carried over the South Manchuria Railway.

Japanese capitalists have within the past decade loaned millions to Chinese industrial plants, thereby securing mortgages on these plants, or operating them as Sino-Japanese enterprises. Of 3,000,000 cotton spindles now in operation in China, nearly 40 per cent represent mills owned or controlled by Japanese. There are an additional 350,000 spindles now under construction under Chinese auspices and nearly 300,000 under Japanese capital and control. Of the 22,500 looms in operation, 13,700 are owned and controlled by Chinese, and 6,000 by Japanese. British interests own and control 250,000 spindles and nearly 3,000 looms. The Japanese have exhibited the greatest ability in handling cotton mills in China. A Chinese writer in commenting upon Japanese participation in the cotton industry in China writes as follows:

The Japanese predomination of this industry, at least temporarily, has taught the Chinese a great lesson both in manufacturing and cotton trading on the market. We should not discredit nor criticize their ambition and their superior knowledge, but rather we should admire and respect them as to what they have done and what we can learn from them. China offers splendid prospects both in cotton growing and cotton manufacturing, as she is ranked the third cotton-growing country in the world, next only to America and India, and she is also the greatest market for cotton yarn and the second largest market for cotton piece goods. She warmly welcomes foreign capital and foreign management to develop her industries, particularly that of cotton production and manufacture. During the comparatively short time of less than two decades,

the Japanese have done a wonderful piece of work in China, which in turn has convinced and installed many new ideas and ideals in Chinese minds toward this important and stable industry. Of course, the former's success means the latter's prosperity.

COTTON MANUFACTURING

Shanghai and vicinity have become the center of the modern cotton manufacturing industry of China. Hankow, Tientsin, and Tsingtao are also important cotton manufacturing cities. In spite of this development, the country is still the largest importer of cotton yarn and probably the second in importance as a market for cotton cloth. There are, however, noticeable reductions in these importations, due to the growth of the native industry.

China offers the American manufacturer an important market for the sale of cotton spindles and looms. Upward of 1,000,000 American spindles are now in use, American equipment being popular in Chinese cotton mills. A detailed list of modern cotton mills in China, with particulars as to locations, capacity, etc., can be obtained upon application to the Bureau of Foreign and Domestic Commerce, Washington, D. C.

FLOUR MILLS

Next to the cotton mills in importance in the development of modern manufacturing in China is the flour-milling industry. The aggregate daily capacity of the 160 modern flour mills is 120,000 barrels. Manchuria, with Harbin as a center, represents the largest aggregate output. Kiangsu Province, with Shanghai and Wusih as centers, is second; and Tsinan, in Shantung, is rapidly becoming a flour-milling center, being now third. Tientsin and Hankow follow as fourth and fifth in importance. The bulk of the capital in this industry is Chinese. Russian interest are second, followed by Japanese and British owned mills. In the section on "China's export products" the subject of wheat and flour is presented in more detail.

The flour mills suffer from their inability to secure wheat of uniform quality, and under conditions economically advantageous to the flour-milling industry. It is interesting to note, however, that the industry is developing with considerable rapidity and that the largest share of the equipment is of American manufacture. A list of the modern flour mills of China showing their nationality, location, and capacity can be obtained upon application to the Bureau of Foreign and Domestic Commerce, Washington, D. C.

MODERN POWER PLANTS

Nothing is more indicative of China's advancement in a modern industrial sense than the very extensive installation of electric light and power plants throughout the country, of which there were at the beginning of 1925 upward of 400 in various localities, with an aggregate capacity of about 250,000 kilowatts. The largest is the municipal plant in the Shanghai International Settlement, operated by the municipal authorities. Its capacity is 121,000 kilowatts. It furnishes the cheapest electric power for industrial purposes of all the plants in China.

It is partially because of this cheap electric power that Shanghai has become China's primary manufacturing center.

In Canton the Canton Electric Co. is the largest plant in the Republic owned and operated by Chinese. It is equipped with American machinery and has a capacity of 12,000 kilowatts. Charging but 13 cents gold per kilowatt unit for light per month and less than 6 cents gold per kilowatt unit for power, it pays 15 per cent dividends on double its original capital investment and holds a franchise for supplying light and power within a radius of 12 miles from its plant.

METALLURGICAL INDUSTRIES

In the section in this handbook on "China's export products," under the paragraphs on "China's mineral products," details are given of the development in the iron and gold industries. China's backwardness in modern industrialism is clearly indicated by the fact that of the country's known resources of 40,000,000,000 to 50,000,000,000 tons of coal, the annual production now amounts to less than 25,000,000 tons, compared with the annual output of the mines of the United States of about 500,000,000 tons.

The following comparative statement of the economic developments in China with those of the United States indicates to a very considerable degree the potentialities possessed by China—a country of similar topographical features, larger in area, and with much greater population.

Items	China	United States
Railways.....miles..	6,500	265,000
Surfaced motor roads.....do.....	(¹)	300,000
Graded dirt roads.....do.....	10,000	1,000,000
Motor vehicles in operation.....number..	15,000	18,000,000
Telephones.....do.....	100,000	17,000,000
Post offices.....do.....	11,000	52,000
Telegraphs, length of wires.....miles..	78,000	1,500,000
Telegraph offices.....number..	900	25,000
Annual coal production.....tons..	20,000,000	500,000,000
Pig-iron production.....do.....	300,000	27,000,000
Cotton-weaving spindles.....number..	3,000,000	36,000,000
Hydroelectric power.....kilowatt-hours..	Nil.	17,000,000,000
Laborers in modern industrial plants.....number..	500,000	7,000,000

¹ Less than 1,000 miles.

² Estimated.

Of China's coal production, about 15,000,000 tons are from modernly operated mines. The Kailan Mining Administration, a British and Chinese corporation which holds special concession privileges in connection with its properties in Chihli Province in North China, in its report for the year 1924 shows profits of \$10,830,000 silver on an aggregate output of 4,464,000 tons, which is the largest in the history of the company. The company declared for the year 1924 an annual dividend of 20 per cent, free of income taxes. The company's cash reserve is about 13 per cent on its share capital. The general manager at the end of the year 1924 reported, "Our mines were never previously better equipped and better developed than at the end of the year under review." The signal success of this large industrial company in China, controlled and operated by British, indicates clearly the possibilities in industrial enterprise even under unfavorable political conditions.

OTHER INDUSTRIES

Among other modern industrial organizations in China are albumen and egg products factories; arsenals; mints; canneries and biscuit factories; chemical works; dockyard, shipbuilding, and engineering works; glass and porcelain factories; ice and cold-storage plants; iron and steel works; tanneries; match factories; oil mills and bean-cake factories; printing and lithographing establishments; railway shops; rice hulling and cleaning factories; sawmills; silk filatures and weaving mills; tobacco and cigarette factories; wool-cleaning and press-packing factories.

It is well to take cognizance of the fact that modern industrial establishments in China are becoming more efficient and turning out better qualities of products as years go by. There is a very noticeable tendency upon the part of the modern factories in China to imitate as closely as possible the products of western factories, in some cases even to the extent of copying the trade-marks of the western manufactured articles. Imitation may be the sincerest form of flattery, but American manufacturers who would prefer to have this flattery take some other form would do well to attend to the registration of their trade-marks, so as to do their share toward protecting a property which has acquired a certain value through their initiation and energy.

WAGES AND LIVING CONDITIONS

Under the craft and trade guild system, piecework rather than a definite daily wage was encouraged. The Chinese laborer is accustomed to the piecework system, and much of the labor is paid upon this basis. The Chinese calendar makes no provision for Sunday as a day of rest, hence many of the modern industrial plants follow the customs of the old order and maintain $6\frac{1}{2}$ or 7 day schedules a week, with apparently more concern for the machinery and equipment than for the welfare of the laborers. The Chinese New Year is the only holiday of any consequence which is common throughout the country. From 10 days to 2 weeks are usually observed by these industrial plants for this great national festival. The daily working hours generally are long, often on a 12-hour basis. The country has not as yet enacted any labor legislation. It is too early in China's economic life to take effective measures to control child labor. In many sections the children appear to be better off in factories than in their homes. At all events, with a people so close generally to the limits of subsistence, it is difficult to prohibit or even regulate child labor. Naturally, with labor upon the plane which it occupies in China, it would be ridiculous to expect the efficiency per individual which obtains in a country like the United States. On the other hand, it is misleading to make the statement that Chinese labor is cheap but inefficient. Considering its cost, it is efficient. Where labor can be secured at 10 to 50 cents gold a day, it is only to be expected that there should be an extravagance in its employment. However, in spite of the low price of labor in China, foreigners who have had considerable experience with it are enthusiastic over its capabilities when placed under proper direction. In fact, even at the low wage scale there are industries in which it is proclaimed,

after a certain amount of training and under proper direction, as equivalent, and in some instances even superior, to the labor of the West.

It is interesting to note that labor in China is in the process of organizing along western lines. There is an excellent foundation for such organization in the trade and craft guilds, which are described fully in an article on this subject in this handbook. Up to the present the organization of labor along modern lines has been confined for the most part to South China. Labor costs in China are gradually increasing, owing mainly to still more rapid increases in living costs. During the past 10 years the average advances for wages throughout China have been about 50 per cent, whereas the average advances in the prices of commodities have been almost double, or nearly 100 per cent. The Shanghai wholesale price index as compiled by the Bureau of Markets, which covers foreign as well as native commodities, taking 100 as the index number for February, 1913, was in December, 1924, as follows:

Cereal products.....	148.1	Building materials.....	139.2
Other foodstuffs.....	151.1	Industrial materials.....	151.8
Textiles.....	157.5	Sundries.....	134.6
Metals.....	179.7	Average for all commodities...	157.4
Fuel.....	177.2		

INCREASE IN PRIVATE WEALTH

During the past few decades wealth in China has increased very considerably. A Chinese banker tells me that 30 years ago a man with \$3,000 was looked upon as well off. To-day little distinction is given to the man possessing 10 times this amount. Within recent years many of the Chinese who have piled up huge fortunes in political life have invested large sums in industrial enterprises. Many of the largest industrial concerns and numerous banking companies are the creations of those who have enriched themselves as military governors or other officials. These people are not able to manage the business ventures themselves, but engage managers, generally men who have been closely associated with them in politics.

Less than 40 years ago the brass cash, 10 of which equaled 1 copper cent, or one-half cent gold, was the coin of the realm. To-day in eastern China—that is, in the trade centers in contact with the outside world—the brass cash are almost curios, so seldom are they seen. A coin ten times the value has replaced the cash, indicating the increased purchasing power of the masses.

CHINESE STUDENTS IN AMERICA

It may be well to remind American manufacturers and capitalists of the great advantages which will accrue to American trade and American enterprises in China in the education and training of Chinese students in American technical and engineering schools. The Chinese is by heritage academically inclined. In his American training he needs to secure a goodly measure of practical experience in industrial plants, in business offices, on farms, and in other actual contacts with the practical phases of American life. He will then be able to take back to his country some clear conceptions as to

American methods of translating education into action, and perchance may be able to adjust this training to the practical needs of his own country. In addition to inviting Chinese to come to America for training in industry and trade, our manufacturers would do well to carry America to China through the industrial and educational motion-picture film, as suggested in a separate article on the subject in this handbook.

As closely related to the subject matter of this section, the reader is advised to read the sections in this handbook on "China's economic structure," and "China's export products." The Bureau of Foreign and Domestic Commerce will furnish to applicants lists of manufacturing concerns in China.

CHINA'S ECONOMIC STRUCTURE

By Commercial Attaché Julian Arnold

China's geographical isolation, its disregard of the civilizations of other peoples, and the all-pervading respect of the intellect of the nation for the teachings of its ancient sages, held the country, at the beginning of the twentieth century, economically still a medieval civilization, although possessed of a rich heritage in a culture which has filtered down through the masses, the resultant of its millenniums of national life. The developments following the application of steam and electricity to the industrial life of the peoples of the Occident only began to make their influence felt in China during the latter half of the nineteenth century.

NEED OF MODERN TRANSPORTATION

Topographically, China and the United States are very similar. Each is a country of vast continental proportions. The great Yangtze Valley of China may be compared with the Mississippi Valley of the United States. Without railways the population of the United States at the end of the nineteenth century would have been grouped about the sea coasts and accessible waterways. The Mississippi Valley would probably have been settled from New Orleans up. This would have been a situation somewhat comparable with that of China. In other words, the great land areas out of touch with water communications would have remained unsettled and undeveloped.

Six-sevenths of China's population is concentrated in one-third of its area. It is a mistake to speak of China as overpopulated. There is in the lower Yangtze Valley, that is, in the Yangtze Delta region, an estimated population of 40,000,000 people, in an area of 50,000 square miles, or about the area of Illinois. Mongolia, with an area equivalent to about one and one-half times that of the States east of the Mississippi River, has a population of about 2,000,000, or less than two to the square mile. There are other regions of the Chinese Republic, comprising hundreds of thousands of square miles, more sparsely populated than any State in the American Union, owing primarily to lack of economic transportation. There are Provinces in China which are cut away economically from the rest of the country and which enjoy only a minimum of commercial intercourse. So-called West China, with an estimated population of 100,000,000, is out of economic communication with the rest of China, hence with the outside world, because of lack of railways. Much of the transportation in this section of West China is on the backs of human beings. If the cargo carried in one year by the railways for the 100,000,000 people of the United States had to be placed on the backs of human beings, it would require 800,000,000

men working 365 days of the year, each carrying a load of 150 pounds over an average of 15 miles a day, to equal it.

This is an impressive illustration of the significance of the lack of economic transportation to those regions in China out of touch with waterways. Transportation in these sections is about ten times as expensive as railway transportation in the United States, although unskilled labor receives there not more than the equivalent of about 12 cents gold a day. To get the wheat from the rich Wei Basin in southern Shensi, where it can be purchased at one-third the price in America, to the Peking-Hankow Railway about 500 miles distant, increases the price to such a degree as to make it cheaper to purchase wheat in America and transport it to the milling centers of China.



FIG. 10.—Native cart on primitive road

Within the past few years, the Governor of Shansi Province has constructed nearly 1,000 miles of good roads in the so-called "Model Province." This was done with the idea of encouraging motor transportation. There are, however, in the aggregate, not more than 75 motor vehicles in the whole of Shansi Province, which has a population of about 10,000,000, in an area similar to that of the State of Kansas. Transportation by pack animals and carts in Shansi averages about 16 cents Chinese silver a ton-mile. Motor transportation runs from 20 to 25 cents a ton-mile, whereas railways should be able to carry cargo at less than 3 cents a ton-mile. Shansi needs a trunk-line railway from north to south, and good roads might then well serve as feeders. Without railways, the most enlightened government in that Province will not make for substantial prosperity. Railways in China operated under reasonably efficient management are potential gold mines, as the populations have preceded the railways in many sections which are not yet provided

with such means of transportation. They can be operated at a cost of less than 50 per cent of their operating revenues.

Mr. J. E. Baker, technical adviser of the Chinese Ministry of Communications, states that the average charge on railways of China is less than $1\frac{1}{2}$ cents silver per ton-kilometer. On more valuable goods the charge is higher; on less valuable goods it is lower. On some lines and on some classes of traffic, the charge is no more than $\frac{1}{2}$ cent per ton-kilometer. The rate per carrier coolie varies probably between 15 and 30 cents silver a ton-kilometer, with the average close to 25 cents. Thus on the average, the carrier coolie's charge is about fifteen times as much as the railway's charge. Mr. Baker further contends that it is no exaggeration to state that railway costs on well located and well managed lines are not more than one-fifteenth of cart costs, and not more than one twenty-fifth of portage costs. Mr. Baker gives the following grouping, showing the number of miles of railway per 100,000 of population in several different countries:

Group I:		Group II—Continued.	
Australia	404	Spain	48
Canada	378	Italy	31
United States	261	Russia	26
New Zealand	254		
Group II:		Group III:	
Switzerland	78	Japan	12
France	64	India	11
Germany	57	Siam	9
United Kingdom	52	China	2

Mr. Baker states as follows:

Those who are familiar with world conditions, know that the common people in the first group live far better than do those in the second or the third group, and that those in the second group (up to the Great War, certainly) live better than those in the third group. It must be remembered that Australia and Canada have encouraged the building of railways ahead of population in order to foster development of the country. Thirty years ago, the United States showed a larger figure than does now.

Once the process of using natural forces for burden bearing begins, the day's labor of the common man will gradually buy more and more of the work which such natural forces do. Thus, in China the carrier coolie's daily wage will buy only 1 ton-kilometer of transportation by carrier coolie, but it will buy 20 ton-kilometers of railway transportation. And in the United States the daily wage of the commonest laborer will buy about 200 ton-kilometers of railway transportation. Thus, the highly developed railway system in the United States has multiplied the transportation strength of its people ten times that of China using railways and two hundred times that of China using coolies only. And transportation strength measures standard of living.

Bad internal communications in China have encouraged provincialism. This has been accentuated through the perpetuation over many centuries of the family system, interwoven with which is ancestor worship. A laissez faire governmental policy left the people to their own devices with a minimum of pressure from above. However, to safeguard against the redevelopment of a feudal system which characterized China prior to the beginning of the Christian era, the civil-service examinations carried with them the stipulation that the native of any Province should not hold official position in that Province. These civil-service examinations, perpetuated for a period of over 1,000 years, also acted as a reinforcing agency hold-

ing Chinese society together with common ideals and aspirations. On the other hand, each community developed its own interpretation of many of the nation's institutions—as, for instance, the country's weights and measures and currency units. Often distinct dialects differentiated a community from its neighbors, although through the civil-service examinations, a common written language, a common literature, and common educational ideals were perpetuated among an aristocracy of learning. This overpowering respect for the teachings of the sages, which marked Chinese society up to the beginning of the twentieth century, encouraged individualism but discouraged initiative, scientific research, and invention, as evidenced by the fact that the country has not as yet developed a patent office. It produced a stereotyped, self-sufficient society. Although this society has been for upward of 2,000 years distinctly democratic, yet education has been for the favored few. Economic conditions were such as to encourage but a very small fraction of the population in seeking an education. Thus, while the civil-service examination acted as a safety valve for the ambition of the nation, yet under it the percentage of illiteracy among the masses was appalling. The great agency in a modern democratic society, the public school, is of recent growth in China.

INDIVIDUALISTIC DEVELOPMENT

China is essentially agricultural, with probably 80 per cent of the people engaged in rural pursuits. Although from time immemorial agriculture has been honored and assigned a position next after learning in Chinese society, one sees but little evidence of improvements in agricultural processes over many centuries. In the United States less than 50 per cent of the people comprise the agricultural population, yet they live better and produce a proportionately greater surplus for export than do the people of China. China suffers from poor and inadequate irrigation, deforestation, lack of a knowledge of proper plowing methods, little attention to seed selection, usurious practices in financing the farming class, a bad and uneconomic marketing system, poor internal communications—in general, through lack of cooperative effort and the application of science to productive industry; and this in spite of the highly industrious and thrifty personal traits of the people.

Similarly, the beginning of the twentieth century found China far behind the Occident in industrial and commercial developments. Individual business rather than the corporate enterprise, domestic handicraft industry rather than organized manufacture with modern machinery, characterized the old China. In an article by George Otis Smith, Director United States Geological Survey, the following statement is made:

Edward Everett Hale charted the course of industrial development when he said that the extent to which the world had changed the laborer who uses his body into the workman who uses his head was the index of civilization. The true measure of industrial progress is found in the amount of mechanical power used to supplement man power.

Mr. Smith calculates that the motor power we are now using, steam and electricity, gives us the equivalent of five energy servants for every man, woman, and child in the United States, which in itself

is equivalent to giving us industrially the effectiveness of 500 millions of people working without this power. This statement can be appreciated in a country like China, which has as yet developed hardly the minutest fraction of its wonderful potentialities in hydro-electric power and where steam power is only at the threshold of its possibilities.

INFLUENCE OF WESTERN IDEAS

It is only in the past 50 years that the Chinese people have come to realize the backwardness of their country in a modern economic sense. About that date the first group of Chinese students was sent abroad to imbibe western learning. That the movement did not have the sympathy of the nation at that time was demonstrated when these students were recalled before they were able to complete their education; and it was years after their return to China before they were permitted to utilize their training abroad for the benefit of their people.

The shock to the nation came in 1894 with their defeat by Japan. It was only then that China realized the efficacy of the western methods which had been adopted by the Japanese.

In the past two decades thousands of Chinese students have matriculated in western universities, imbued with the idea of making China over along modern lines; but the experience of the past few years has shown that the task is too stupendous and that no hasty progress in connection with the establishment of a new economic order in China may be expected. To some this has brought a keen sense of disappointment in the efficacy of western ideas, and has induced reaction. There are those who lay the blame upon the foreign institutions, and advocate a reversion to the old order. The better balanced, however, realize that too much was expected of the superficial in western learning, as acquired by many of those who journeyed abroad, and who looked to it to serve in itself as a panacea for China's ills. There is now a substantial realization, on the part of these better informed persons, that what modern science and western learning have to offer must be adjusted to meet the peculiar needs of the Chinese environment.

China was not prepared for the drastic changes which came with the overthrow of a monarchy of several thousand years, and the sudden inauguration of a republican form of government. Under the old order the family system had been accentuated to such a degree that the individual was trained to a deep and keen sense of responsibility in his relations to the family or clan, but with little or no appreciation of responsibility to the larger unit, the community or the nation. Thus public opinion, so essential to the success of a representative form of government, had not been developed under the monarchy. What protection the individual required in his relations to society was secured through his affiliations with his clan and with his trade, craft, or provincial guilds. Custom and tradition carried more weight than law. The lawyer was unknown in Chinese society prior to the beginning of the twentieth century. A man's relations to his fellow men were based upon equity rather than upon legal definition. On the whole, society was very loosely knit, so far as its relations to the larger unit, the central government, was con-

cerned. So long as China remained isolated, this condition of affairs might have continued. There were apparently no reasons from within for a change, but the inevitable contact with the civilizations of other peoples altered the entire situation.

With the inauguration of the Republic, there has been a tendency to scrap the institutions of old China in wholesale fashion irrespective of relative values, and to take on occidental institutions in form rather than in essence. For instance, the ideas of corporate business, as taken from the west, can not succeed in China without an accompanying sense of the responsibility of trusteeship. Potentially the Chinese possess the qualities necessary to the success of corporate enterprise, but before corporate business can be developed in a large way among the Chinese mercantile communities, it will be necessary to institute a body of law and courts competent to build a solid foundation for the new order.

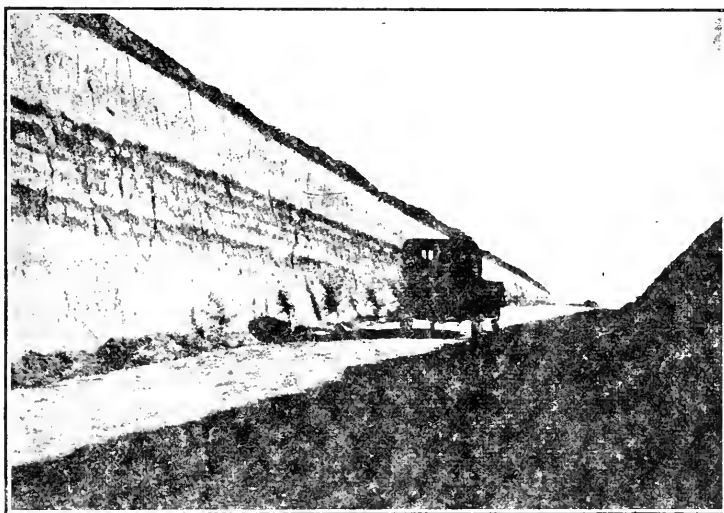


FIG. 11.—Automobile on new type motor road

During the past decade, the Chinese have organized numerous manufacturing companies of a corporate nature. Under the extraordinary conditions resulting from the World War, huge profits were made, but, unfortunately, these were paid out in dividends without the building up of reserves or provisions for depreciation and maintenance. Consequently with the leaner years following the termination of the war, many of these companies suffered financial embarrassments for lack of liquid capital.

The family system, admirably adapted to the old order before the introduction of modern machinery and the application of the principles of modern science, handicaps in many ways the building up of trade and industry on modern lines. The responsibility of a successful member in a family for all his relatives is disastrous to the pay roll of a corporate institution in which the successful member

is a director. The institution known in China as "face," which is so strongly identified with the family system, militates against young men starting at the bottom of the ladder and working their way up. Students trained in engineering in the West return to China reluctant to participate in anything resembling manual labor. "Face" stands in the way. The trade and craft guilds' apprentice system also adds to the difficulties of young men of education launching upon a career in business or industrial establishments. Gradually these handicaps to the successful institution of a modern economic order will disappear, but for many years after they have disappeared in form the essence will continue in evidence. An analogous situation exists in Japan, where in form feudalism has disappeared while in essence it continues to embarrass industry and trade.

The greatest handicap to the rapid institution of a successful modern economic society in China is the disintegration of central government authority. Following the dissolution of the monarchy, numerous individuals working through the control of military organizations, have set themselves up in various parts of the country as semi-independent rulers, with the result that we now have in China over 1,000,000 men under arms serving various leaders, each pitted against the others in efforts to strengthen his own political position. The economic conditions in the country generally have encouraged individuals to join the standards of these semi-independent leaders as promising them a better means of livelihood than the struggle to eke out an existence otherwise. Thus, soldiering in China seems to be a matter of necessity rather than of choice. With improved economic conditions, particularly improved internal communications, the temptation to leave the productive employments for employment in brigand armies would be less in evidence. Thus, whatever may be done to improve the general economic conditions of the country would assist in hastening the development of a stronger central government.

A promising aspect of the situation is the sense of nationalism which is growing, particularly among the business men, bankers, and the students of the country. This, together with the receptivity of the people generally to modern ideas, promises much for the future. The Chinese are essentially an industrious people; they possess good ethical and educational ideals; and they are natural traders and show ability in handling the machinery of modern industry. The problems confronting the country to-day are stupendous. The transition from a mediaeval civilization to that of a modern social and economic order, for a people possessing one-quarter of the world's population and an area greater than that of the United States or Europe, must of necessity be attended with friction and must involve the time element, especially as the evolution is one from the bottom up rather than from the top down.

Nothing better exemplifies China's backwardness in a modern economic sense than its per capita consumption of iron and steel, which is one one-hundred-and-eightieth of that of the United States, one one-hundredth of that of England or Germany, one-tenth of that of Japan, and one-thirtieth of the average per capita consumption of the world generally. The country possesses the best coal and iron resources of the Pacific regions, but very little by way of develop-

ment has yet taken place in these two industries which constitute the backbone of the modern industrial society. Further details as to China's productive capacity will be found in the section in this handbook on "China's export products." These figures indicate clearly the backwardness of the country in a modern economic sense, and, at the same time, serve to convey to the minds of the American reader, who resides in a country very similar in topography to that of China, the enormous potentialities of the Chinese Republic as a modern economic society.

Among western observers there are those who would discourage China's rise as a modern economic and political society, fearing the competition of the 400,000,000 of industrious Chinese, when armed with the implements of modern science. A weak, undeveloped China is a far greater menace to the world than a strong, well ordered, well nourished population would be—especially one possessing the rich background of culture that characterizes the Chinese. The West need only fear a "Yellow Peril" so long as the economic level of China remains below that of the Occident. Through the development of China, and of Asia's great treasure houses of natural resources, the economic level of the Chinese people can be elevated to that approaching America's, with a corresponding advance in the earning and purchasing powers of the individual. It is then to the interest of the American people to assist in every possible way the improvement of the economic condition of the Chinese.

CHINESE GOVERNMENT FINANCE

By Assistant Commercial Attaché A. H. Evans, Peking

The power of government to tax and bring the proceeds into its own treasury is the first factor requisite to a successful administration of public finance, whether on a large or small scale. The central Government in China has not held this power in the past and does not do so to-day. The wealth is in the country; the resources are there; but the methods of tapping them, while sufficient to supply the comparatively modest needs of the Imperial dynasties, have broken down completely as a result of the hasty efforts made by the Republic to establish a centralized control of revenues which historically were always under provincial administration.

Successful transition to the new centralizing policy would have been difficult in the most modern country, but in China the obstacles were out of all proportion to the facilities at the command of the Government to enforce obedience to the new order. The large area of the country, its numerous illiterate population, the unfamiliarity of the people with representative government and its methods, the scarcity of trained leaders, the inheritance of a corrupt office-holding class, and, above all, the unyielding resistance shown by the Provinces to the efforts made to centralize financial control, combined to make the task beyond the Government's capacity. Attempts by outside interests to rivet their grip on various factors in the country's economic life also have aggravated the situation.

Since 1911 the financial condition of the central Government, both at home and abroad, has grown steadily worse under each succeeding régime. This condition is largely due (1) to the unfortunate borrowing policy adopted to meet administrative expenses and the contraction of other loans not used for productive purposes; (2) to the growth of the provincial practice of retaining central Government tax revenues; and (3) to the development of large military groups unwilling to acknowledge central Government authority but forcing the Government to support them.

Prior to the revolution (1911-12) which ended the rule of the Manchus and established the Republic, the Imperial Chinese Government gave little attention to details of the financial administration of the Empire. During centuries of time there had developed a decentralized system which vested in the provincial authorities power to collect all revenues. The Imperial Government Board of Revenue received regularly statements from the Provinces, prepared with decimal exactness, but these generally were estimates of collections rather than accounts of cash receipts.

In theory, all revenue belonged to the Emperor. The requirements of the court, however, were comparatively small, and until the imposition of the Japanese war indemnities of 1895 and the Boxer indemnities at the beginning of the present century there existed

only a nominal burden of either internal or foreign indebtedness. By imperial edict the court prorated its budgetary requirements among the Provinces according to their estimated abilities to pay, periodic remittances of goods and specie being made to Peking by the Provinces. No particular efforts were made by the court authorities to determine the specific tax from which the remittances had been derived, so long as demands were met promptly. Appointments to important provincial treasury posts were made by the court in accordance with a carefully worked out system of values which graduated the appointment fees in proportion to the commercial importance and wealth of the district. When national emergencies arose and additional funds were required for defense purposes or to meet debt-service charges, new edicts were promulgated, placing upon the Provinces responsibility for securing the funds. The result of this system was to grant the Provinces a measure of financial independence which amounted practically to fiscal autonomy.

The only important exception to this condition occurred in the case of the Chinese Maritime Customs, legally established through the Tientsin treaties of 1858 with the United States, Great Britain, France, and Russia, although it had begun to function four years earlier. This administration was under the general control of the central Government. Its actual receipts it made public in independent statements published by the foreign inspector general. The revenues, it is true, still continued to go into the provincial treasuries, for the central Government was then in no particular need of these specific funds. The new method, however, of submitting reports founded on facts suggested to the court new possibilities in regard to the accounting that might be required of its provincial revenue-collecting agencies. Thereafter the central Government, when its fiscal needs became most pressing, made intermittent efforts to strengthen control of provincial finance and to require more accurate accounts, but with small success.

The situation is described by one writer¹ in the following language:

There was general agreement on one point: that it was absolutely necessary the central Government should get more power into its hands, at least on purely financial matters. The Provinces had enjoyed from time immemorial the power of regulating their internal finances without any supervision whatsoever, and it was only to be expected that they would not give way unless under extreme pressure. To exercise control of finances certainly meant that Peking intended to have a better grip over the Provinces in other respects. If the people had been profiting out of the misgovernment, if they had been paying less in taxes to the officials, a new call to bear additional burdens would not possibly have been felt; but the fact was that the taxpayer was ground down by the tyranny of the officials so much that no increase of taxation was possible without exciting acute discontent. The officials were growing fat on the peculation which they were allowed to exercise freely so long as they paid sufficient in bribes to the court officials in Peking. The provincial officials had been emboldened, by the venal support they had in Peking, to offer less and less for the actual purposes of the Government. Repeated requests, demands, and appeals to patriotism met with very little response from the Provinces. The severe famines, floods, and other distress in the country, not to speak of the ever present and sporadic rebellions, not only led to increased provincial expenditures but also to frequent requests to Peking from the Provinces to forego, partly or entirely, or to postpone payment of the sums due from them. The central Government was only too well aware of the

¹ Finance in China: S. R. Wager (1914), pp. 10-12.

fact that there were no means of enforcing the demand for increased contributions. The removal of a viceroy, a governor, or a treasurer as punishment for not fulfilling his duties diligently in the shape of sending contributions to Peking was one of the few courses that remained open. It was felt, however, that such expedients did not help toward the object in view. When the whole body politic was corrupt, it was impossible for the officials who were directly controlled and appointed from Peking to do anything in the way of increasing revenue.

Following the war with Japan in 1894 China found it necessary to make three foreign loans in order to pay the indemnity demanded by Japan. The central Government pledged the customs receipts as security for the Russian-French (1895) loan of 400,000,000 francs and the two Anglo-German (1896 and 1898) loans of £16,000,000 each, and used the proceeds to pay the Japanese. In 1901 the Boxer indemnity of 450,000,000 haikwan taels was added. No provision was included in the agreements specifically providing that actual customs funds were to be used in meeting the debt-service charges, nor were the customs rates increased to provide additional revenues to meet these new charges. The representatives of the foreign interests received their payments as they fell due and asked no questions regarding the source from which they were derived.

EFFORTS TO CENTRALIZE CONTROL OF REVENUES

Following the revolution of 1911-12 and the establishment of the Republic, sweeping efforts were made by the new Government to centralize control of all those revenues upon which it depended for financial support. The new policies and their results have been described by Sir Francis Aglen² as follows:

The Maritime Customs revenue till then collected and accounted for but not directly handled by the foreign side of the Maritime Customs Administration, came under strict control and was taken completely out of provincial hands. The Maritime Customs collection became identified as a central Government fund in a way unknown before. President Yuan Shih-kai in the full tide of his centralizing policy attempted to do the same with the salt revenue, hitherto regarded as the mainstay of provincial finance, and for a time he succeeded. The salt revenue was pledged as security for two foreign loans, foreign control of receipts was introduced, and these receipts were definitely earmarked as central Government funds. A similar policy was pursued in the case of other inland revenues, notably the wine and tobacco revenue and the stamp duty. The Provinces were left to fill the vacuum caused by the withdrawal of these revenues as best they could. Another turn was given to the likin screw, recourse was had to usurious loans, and other even more questionable means for raising the wind were employed.

But the vacuum was too great to be filled, and the inevitable results of building on an insecure foundation were not long in showing themselves. The financial structure of the State, never at the best of times very coherent, began to creak, and ere long it collapsed altogether. The Imperial Government had followed precedent and sound policy in placing responsibility in hands which held the power. It had imposed the burden of supporting the State debt on provincial shoulders and had been careful not to sap the financial strength of the Provinces by too sudden a reversal of a highly decentralized system of administration which had endured for ages. The Republican Government reacting to foreign impulses in its haste to centralize authority has thrown the machine out of gear. It has assumed the responsibility for State obligations without the power to meet that responsibility. Power has always been vested in the Provinces, and there it will remain. Already the provincial authorities have resumed control over a large portion of the salt revenue and all but an insignificant fraction of the wine and tobacco revenue

² China and the Special Conference—In Nineteenth Century, August, 1924.

and the stamp duty. Alone of all the so-called central Government revenues, the Maritime Customs collections remain intact. The divorce of responsibility from power has produced the situation in China which confronts the world to-day—an empty State treasury and a pile of debt.

The Chinese Government missed a wonderful opportunity during the later years of the World War and until the end of 1920 to reduce some of its foreign indebtedness at the most favorable exchange rates for silver currency that have existed since the debts were contracted. Instead of the normal ratio of approximately \$2 silver to \$1 gold, the value of silver either exceeded or was nearly on a parity with the gold currencies for about three years. An internal loan floated during that period with the proceeds applied to retirement of gold debts would have represented a reduction of approximately 50 per cent in the silver needed, as compared with requirements at the exchange rates that have been current since 1920. The opportunity passed unheeded by the Government, and instead of making efforts to reduce the foreign debt under unusually advantageous circumstances, several new gold loans were contracted, the proceeds of which, when transferred into Chinese currency, produced only about 50 per cent of their normal silver value.

DEBTS

With the exception of the Japanese war and the Boxer indemnities, the outstanding debts³ of the central Government have nearly all been created by the Ministry of Finance and the Ministry of Communications. Cabinet approval has been regarded as sufficient in most instances to make the agreements binding upon the Government.

An official report, published April 16, 1924, by the Chinese Government Commission for Readjustment of Finance, stated that "secured obligations of the Ministry of Finance amount to silver \$1,186,567,840." The present securities for these obligations appear to be adequate, and the debts require no special consideration. The unsecured loans of the ministry, however, fall into quite a different category, for most of them are in arrears in payments on principal and interest, and both the creditors and the Government naturally are concerned over the situation.

The commission stated in the report mentioned above that the unsecured loans of the Ministry of Finance, including overdue interest to the end of 1923, amounted to \$536,303,000 silver. In comparing this amount with other calculations it seems evident that the ministry has omitted the Austrian loan of £5,200,000, which (at \$9 silver to £1 sterling) equals \$46,800,000 silver. Mr. G. Padoux, financial adviser to the Chinese Government, in commenting upon this loan, makes the following statement: "The agreement seems to have been canceled, but the money is nevertheless still owing to the present bondholders."⁴ Inclusion of this loan would increase the unsecured debts to \$583,103,000 silver. In addition, the commission stated there were \$187,500,000 silver of Ministry of Communications debts which it expected the Ministry of Finance would have to as-

³ A list comprising the details of China's debts is found in Appendix D of "Currency, Banking, and Finance in China," by Dr. Frederic E. Lee.

⁴ Memorandum for the National Commission for the Study of Financial Problems, January, 1923.

sume. This would bring the total unsecured debts up to approximately \$770,603,000 silver. It is understood that no allowance was made by the commission in this calculation for the unsecured debts of the railways and telegraphs on account of materials purchased. These debts, according to the official publication⁵ of the Ministry of Communications, were at the beginning of 1923 as follows: Railways, \$39,313,000 silver; telegraphs, \$7,699,000 silver; total, \$47,012,000. Even interest was not paid on many of these accounts during 1923 and 1924, so that at the beginning of 1925 it seems safe to estimate them as at least amounting to the above official figure, and it may be that the total amount has increased. Nearly all of them are overdue and they are entitled to receive consideration in any reorganization of the Government's unsecured debt.

The amortization service on the internal consolidated loans,⁶ paid from surplus customs receipts after foreign-loan service has been met, was in arrears one year on January 1, 1925. Interest payments have been made when due, but the inadequacy of funds for principal payments indicate that the consolidated loans can at least be considered as being imperfectly secured. The principal amount outstanding on these loans September 1, 1924, was \$142,420,000 silver. If this amount, together with the railway-material debts mentioned above, is added to the unsecured indebtedness, the total reaches \$960,035,000 silver. Simple interest at 8 per cent on this amount for the different periods involved, exclusive of interest on the internal consolidated loans, adds in round figures \$72,000,000 silver, bringing the total unsecured or imperfectly secured debt of the central Government up to approximately \$1,032,000,000 silver at the beginning of 1925. An itemized summary of this amount would be approximately as follows (values in silver dollars):

Unsecured debts of Finance Ministry, including overdue interest to end of 1923.....	\$536, 000, 000
Simple interest at 8 per cent for 1924.....	43, 000, 000
Austrian loan of £5,200,000, at \$9 silver per pound sterling.....	47, 000, 000
Simple interest at 8 per cent for 1923 and 1924.....	7, 000, 000
Ministry of Communications loan obligations transferred to Finance Ministry.....	187, 000, 000
Status of interest payments not definitely known but probably in arrears one year, at 8 per cent equals.....	15, 000, 000
Ministry of Communications material debts as officially stated January, 1923.....	47, 000, 000
Simple interest at 8 per cent, 1923 and 1924.....	8, 000, 000
Domestic consolidated loans imperfectly secured. (Interest payments made but amortization in arrears one year).....	142, 000, 000

Estimated total unsecured or imperfectly secured central Government debt, end of 1924.....	1, 032, 000, 000
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Exception may be taken to inclusion of the internal consolidated loans under the category of unsecured or imperfectly secured debts, inasmuch as they are now being served from the surplus customs receipts after payments are made on foreign loans and indemnities. The view of the foreign powers on this question is contained in the

⁵ Tables Showing Various Obligations of the Ministry of Communications Calculated up to Jan. 31, 1923, pp. 15 and 19.

⁶ These loans are dealt with in detail in Doctor Lee's "Currency, Banking, and Finance in China." Chap. XIV.

note quoted below, which appeared in the Peking press in October, 1923:

The undersigned representatives of the United States of America, France, Great Britain, and Japan have the honor to refer to their memorandum of December 23 last, in which they drew the attention of His Excellency, the Acting Minister of Foreign Affairs, to the fact that while the unsecured foreign debts and obligations of the Chinese Government had been left unprotected, China's internal loans had been temporarily consolidated on the security of surplus customs revenues, and requested that in future such surplus customs revenues should no longer be applied exclusively to the service of the internal loans, but also to the liquidation of foreign debts and obligations guaranteed by the Chinese Government.

The attention of the undersigned has now been called to a memorial of the Ministry of Finance published in the Government Gazette of September 21 and approved by mandate recommending the permanent continuance of the scheme for securing the service of the internal loans on customs surplus resulting from the effective 5 per cent tariff and its extension to the service of the Chinese portion of the \$96,000,000 loan of 1922, thus earmarking for the service of these internal loans the whole surplus accruing from the present customs tariff, and precluding the use of the latter as security for any general debt consolidation scheme.

The undersigned are compelled to record a formal protest against the action of the Chinese Government in disregarding their communication of December 23 last and making the above arrangements. They would remind His Excellency the Acting Minister for Foreign Affairs (1) that the foreign debts and obligations of the Chinese Government, certain of which are now in default, were contracted by the Chinese Government before the date of the conclusion of some of the internal loans which, according to the present proposals, are to be secured on surplus customs revenues; and (2) that under the terms of the agreements for such foreign loans the Chinese Government engages, in the event of the default or of the specific security pledged becoming ineffective, to provide from other sources the sums necessary for the due payment of principal and interest. The undersigned must, therefore, point out to His Excellency that those foreign loans are entitled to an automatic priority over the later internal loans, which priority the above mentioned action of the Chinese Government entirely ignores.

They accordingly request that they may be favored with an immediate explanation of, and a clear statement regarding the intention of the Chinese Government with respect to the employment in the future of surplus customs revenue toward the payment of foreign debts and obligations.

Interest rates on some of the foreign portion of the unsecured debt run as high as 1.2 per cent per month or 14.4 per cent per annum, and on much of the domestic portion the rates are even higher. Therefore the simple rate of 8 per cent used in the foregoing estimate probably is considerably less than the average rate on the entire debt. It also is true that some of the domestic loans were contracted by the Government at very high discount rates. When the political affairs of the Government finally justify the serious preparation of funding plans, it then will be desirable to examine the domestic debt from this standpoint, and to work out funding values on a basis approximating actual money received by the Government when the securities were issued. Adjustment of usurious interest accumulations also appears to be very necessary.

Since, however, these bonds are selling at a great discount they could probably be refunded at a much smaller figure. A debt consolidation plan has been advanced, which assumes the total of the unsecured debt at a round billion dollars, on which payment of interest at 4 per cent would begin in 1927, advancing in 1929 to 5 per cent, and in 1932 to 7 per cent. Amortization would begin in 1927, at \$5,000,000, increasing by a like amount annually—the total

payments to extinguish the debt in 20 years. Under this plan the annual payments on interest and principal would be as follows:

SERVICE OF CONSOLIDATED DEBT

Years	Rate	Interest	Amortization	Total service of debt
	<i>Per cent</i>			
1927.....	4	\$40,000,000	\$5,000,000	\$45,000,000
1928.....	4	59,800,000	10,000,000	49,800,000
1929.....	5	49,250,000	15,000,000	64,250,000
1930.....	5	48,500,000	20,000,000	68,500,000
1931.....	5	47,500,000	25,000,000	72,500,000
1932.....	7	64,750,000	30,000,000	94,750,000
1933.....	7	62,650,000	35,000,000	97,650,000
1934.....	7	60,200,000	40,000,000	100,200,000
1935.....	7	57,400,000	45,000,000	102,400,000
1936.....	7	54,250,000	50,000,000	104,250,000
1937.....	7	50,750,000	55,000,000	105,750,000
1938.....	7	46,900,000	60,000,000	106,900,000
1939.....	7	42,700,000	65,000,000	107,700,000
1940.....	7	38,150,000	70,000,000	108,150,000
1941.....	7	33,250,000	75,000,000	108,250,000
1942.....	7	26,000,000	80,000,000	108,000,000
1943.....	7	22,400,000	85,000,000	107,400,000
1944.....	7	16,450,000	90,000,000	106,450,000
1945.....	7	10,150,000	95,000,000	105,150,000
1946.....	7	3,500,000	50,000,000	53,500,000

In the case of payments on China's debt, several unknown factors are involved; for over one-half of the payments must be made in gold currencies on which the exchange rates can not be forecast with any degree of accuracy. The silver requirements each year, therefore, might be more or less than the amounts shown in the above tabulation, but if conversion into silver dollars of the debt items which make up the foreign portion of the total debt is considered reasonable (pounds sterling at 9; gold dollars at 1.90; francs at 7; yen at 0.90), then the yearly debt service would be approximately as shown in the above table.

In this connection it is interesting to note how the haikwan-tael cost of payments of foreign loans and the indemnity secured on the Chinese Maritime Customs fluctuates. During 1922, 1923, and 1924 the cost is officially stated to have been in round figures:

Years	Foreign loans	Indemnity
	<i>Haikwan taels</i>	<i>Haikwan taels</i>
1922.....	21,619,190	15,168,590
1923.....	24,374,800	18,838,170
1924.....	23,629,790	19,358,420

INCOME

In order to make clear the present financial status of the Chinese Central Government it becomes necessary to examine the current income account. The best official statement of the Chinese Government itself is found in the figures published in the report of the Financial Readjustment Commission in April, 1924, to which reference already

has been made. The statement in part is as follows,⁷ all amounts being in silver dollars:

Taking up first the question of revenue, it is a well-known fact that the income is far from being sufficient to meet the expenditures, owing to the fact that not only have the Provinces ceased to remit funds for the support of the central Government as was done in the past, but they have even gone to the extent of appropriating for local use revenues which belong to the central Government. At present the Government derives its revenue principally from five sources, namely:

1. The Maritime Customs and native customs within 50-li limit.
2. Native customs outside the 50-li limit and along the land frontiers.
3. The salt gabelle.
4. The wine and tobacco taxes.
5. The stamp duty.

From the five sources enumerated above, the amount of revenue collectible each year is about \$209,000,000. The net amount remitted to the Government, however, falls far short of this sum, for among these only the customs revenue has remained intact.

Of the revenue from the native customs outside of the 50-li limit, besides the two million odd dollars from the Peking octroi, not more than \$700,000 has reached the central Government through the other sources. As to the salt revenue, about \$30,200,000 was retained by the Provinces, while about \$10,300,000 was required for the cost of collection, so that the actual amount realized by the central Government was only about \$49,300,000. As to the wine and tobacco taxes and the stamp duty, the actual amounts remitted to the central Government constituted only one-tenth of the amount collected, or about \$1,400,000 in the first case and about \$300,000 in the second case. It can thus be seen that out of a nominal total of \$209,000,000 the actual sum realized by the central Government is about \$148,000,000, out of which has to be again deducted a sum of \$98,000,000 for the service of the domestic and foreign loans secured upon the customs and salt revenues and about \$43,000,000 for military subsidies and the redemption of the different kinds of treasury notes secured upon the salt surplus, thus leaving only about \$7,000,000 unappropriated which can be made use of by the central Government for administrative and other military expenses.

Now according to the latest available figures the annual requirements for administrative expenses are about \$58,000,000 and for military expenses about \$70,000,000, making a total of \$128,000,000. While this does not exceed the amount authorized by the budget of the eighth (1919) year of the Republic, which has been adopted by a mandate of November 29, 1923, as a standard for the Government's retrenchment policy, yet the precariousness of the situation is easily apparent when it is borne in mind that all these sums have to be met out of the meager amount of only \$7,000,000 which is at the free disposal of the Government. In other words, the actual amount remitted to the Government is not more than seven-tenths of the amount collected, while the unappropriated portion available to the Government is only 5 per cent of that amount.

A situation created by the fact that the expenditure of the Government exceeds the amount at its disposal by seventeen times is serious enough. But worse still is the fact that there is also a large amount of unsecured or inadequately secured loans which call for immediate readjustment. Calculating on the basis of the figures given in its official statement of September, 1922, the outstanding principal and interest of the loans of the Ministry of Finance amount to \$536,000,000, and the portion of the loans of the Ministry of Communications which it can not itself take care of, according to a memorandum it has recently prepared and sent to the Commission for the Readjustment of Finance, amounts to \$187,000,000, making a grand total of \$723,000,000. If consolidation bonds were issued, bearing interest only at the rate of 5 or 6 per cent per annum, the sum required for the payment of interest alone will amount to \$40,000,000 or \$50,000,000 a year. Under the present financial stringency, when the Government is already facing a deficit of about \$121,000,000 per year, the difficulty of providing an adequate sinking fund for the loan service can be readily appreciated.

⁷ A very full resumé of the preliminary report may be found in the China Year Book, 1924, p. 738 ff.

It is therefore apparent that if national finance is to be reestablished upon a solid foundation, comprehensive measures for fundamental readjustments must be undertaken at once, both in the way of radically curtailing the expenses and also of effectively increasing the receipts of the Government.

The foregoing résumé by the chairman of the commission can but leave one with a feeling that possibilities for improvement in central Government finance are predicated upon so many ifs over which the central Government has no control, that foreign unsecured creditors face a serious situation. The only practical way, therefore, for the Government to work out of its present financial predicament appears to be contained in the suggestion that the revenues of the central Government which are to be increased by the imposition of the 2½ per cent surtax envisaged in the Washington treaty be applied as a sinking fund for readjustment of unsecured loans. The soundness of this plan has been generally recognized.

DEBT CONSOLIDATION PLANS

Use of the increased customs revenues as security for funding the present unsecured debts has been the broad basis upon which all recent studies of Chinese Government finance have rested, the chief reason being that the customs collections are recognized as the only dependable source of income which will be available to the Government or the creditors until radical political and constitutional reforms are carried out. These will require considerable time, perhaps years, before they become effective. With the ratification of the nine power treaty completed on August 5, 1925, the special customs conference was convened on October 26.⁸

It was estimated at the time this treaty was arranged that imposition of the 2½ per cent surtax would produce approximately \$27,000,000 silver, and the surtax of 5 per cent on luxuries something over \$2,000,000 silver. Monsieur Padoux, adviser to the Chinese Government, in a pamphlet published January, 1923, made a conservative estimate of \$28,000,000 silver for returns from both surtaxes, with an annual increase of \$3,000,000 silver to be expected from the natural growth of trade. A committee of the American Chamber of Commerce in Peking also studied the question and came to the conclusion that these estimates were reasonable. Both Monsieur Padoux and the Chamber of Commerce prepared studies showing the extent to which the net customs revenues and the receipts from the surtaxes would meet the service charges on the unsecured debt if it were funded. The details of these plans involve differences in treatment of the foreign and domestic debt and suggest considerable scaling down of interest and principal of the domestic debts. The latter operation, as the American committee states, can best be considered by the Chinese themselves.

AVAILABLE SOURCES OF REVENUE

CUSTOMS SURPLUS

The total loan charges now fixed on the customs revenue amount to approximately \$90,000,000 (1926). These charges, according to

⁸ The articles of this treaty describing the purposes of the conference may be found in the China Year Book, 1924, pp. 1161-1164.

Monsieur Padoux,⁹ are: (1) The Russo-French loan of 1895; (2) the Anglo-German loans of 1896 and 1898; (3) the 1901 indemnity (Boxer indemnity); (4) the reorganization loan of 1913; (5) several domestic loans.

The situation as regards the loans of 1895, 1896, 1898, and 1913 is clear, these loans being charged in accordance with the interest and amortization tables attached to the original loan agreements.

But the situation as regards the 1901 indemnity and the domestic loans is somewhat intricate. The Austrian and German share of the Boxer indemnity has been canceled, and the American, Russian, French, British, and Japanese shares have been remitted to the Chinese Government, or are in the process of being remitted; they are now to be used for specific domestic purposes. The remitted Russian portion has, however, been hypothecated for the service of several domestic loans which have been secured on it.

The following table gives the foreign and domestic charges against the customs revenue for the years indicated. The figures under the heading, "Remitted portion of 1901 indemnity," include only:

1. The American, British, French, and Japanese shares.

2. The balance available from the Russian share after payment of the domestic loans secured on it.

It is of interest to note in connection with the following figures that the Boxer indemnity payments still retained by the powers form a very inconsiderable part of the total customs revenues.

CHARGES ON CUSTOMS REVENUE

[In thousands of silver dollars; i. e., 000 omitted]

Years	Foreign						Domestic			Total foreign and domestic charges
	4 per cent Russo-French loan of 1895	5 per cent Anglo-German loan of 1896	4½ per cent Anglo-German loan of 1898	Retained portion of 1901 indemnity	5 per cent re-organization loan of 1913	Total foreign charges	Remitted portion of 1901 indemnity	Domestic loans	Total domestic charges	
1926	7, 529	8, 548	7, 441	3, 259	13, 464	40, 241	14, 309	34, 985	49, 294	89, 525
1927	7, 529	8, 540	7, 437	3, 259	13, 464	40, 229	14, 469	36, 164	50, 633	90, 852
1928	7, 259	8, 532	7, 433	2, 642	13, 464	39, 590	14, 629	37, 366	51, 995	91, 585
1929	7, 529	8, 523	7, 430	2, 642	13, 464	39, 581	15, 641	24, 328	39, 969	79, 550
1930	7, 529	8, 515	7, 426	2, 642	13, 464	39, 570	15, 701	23, 416	39, 117	78, 687
1931	7, 469	8, 505	7, 422	2, 642	13, 464	39, 492	18, 821	20, 226	39, 047	78, 539
1932		8, 495	7, 417	3, 813	13, 464	33, 179	29, 168	8, 956	38, 124	71, 303
1933			7, 413	3, 813	13, 464	24, 680	29, 168	8, 519	37, 687	62, 371
1934			7, 408	3, 813	13, 464	24, 675	29, 168	8, 962	38, 130	62, 805
1935			7, 403	3, 813	13, 464	24, 670	29, 168	5, 513	34, 681	59, 351
1936			7, 398	3, 813	13, 464	24, 665	29, 168	5, 242	34, 410	59, 075
1937			7, 393	3, 813	13, 464	24, 660	29, 168	4, 973	34, 141	58, 801
1938			7, 387	3, 813	13, 464	24, 654	29, 168	4, 732	33, 870	58, 524
1939			7, 381	3, 813	13, 464	24, 648	33, 673		33, 673	58, 321
1940			7, 375	3, 813	13, 464	24, 642	33, 673		33, 673	58, 315
1941			7, 369	1, 942	13, 464	22, 765	15, 618		15, 618	38, 383
1942			7, 362	1, 942	13, 464	22, 758	15, 618		15, 618	38, 376
1943			7, 355	1, 942	13, 464	22, 751	15, 618		15, 618	38, 369
1944				1, 942	13, 464	15, 396	15, 618		15, 618	31, 014
1945				1, 942	13, 464	15, 396	15, 618		15, 618	31, 014
1946					13, 464	13, 464	5, 146		5, 146	18, 610
1947					13, 464	13, 464	5, 146		5, 146	18, 610
1948					13, 464	13, 464				13, 464
1949					13, 464	13, 464				13, 464
1950-1960					13, 464	13, 464				13, 464

⁹ Consolidation of China's Unsecured Debt, by G. Padoux, British Chamber of Commerce Journal, Shanghai, September-October, 1925.

Monsieur Padoux, in the article just referred to, modified slightly his estimates on the increases likely in the customs revenue from the imposition of the surtaxes. The following table is the more recent estimate made by him of the possible increases, together with the total charges, domestic and foreign, against the customs, and the balances available for reconstruction.

BALANCE OF CUSTOMS REVENUE AVAILABLE¹ FOR FINANCIAL RECONSTRUCTION

Years	Net customs revenue	Charges		Surplus
		Foreign	Domestic	
1926.....	\$125,000,000	\$40,250,000	\$49,250,000	\$35,500,000
1927.....	128,000,000	40,250,000	50,600,000	37,150,000
1928.....	131,000,000	39,600,000	52,000,000	39,400,000
1929.....	133,000,000	39,500,000	40,000,000	53,500,000
1930.....	135,000,000	39,600,000	39,100,000	56,300,000
1931.....	137,000,000	39,500,000	39,000,000	58,500,000
1932.....	139,000,000	33,200,000	38,100,000	67,700,000
1933.....	141,000,000	24,700,000	37,700,000	78,600,000
1934.....	143,000,000	24,700,000	38,100,000	80,200,000
1935.....	145,000,000	24,700,000	37,000,000	85,600,000
1936.....	147,000,000	24,700,000	34,400,000	87,900,000
1937.....	149,000,000	24,700,000	34,100,000	90,200,000
1938.....	151,000,000	24,700,000	33,800,000	92,500,000
1939.....	153,000,000	24,700,000	33,500,000	94,700,000
1940.....	155,000,000	24,700,000	33,600,000	96,700,000
1941.....	157,000,000	22,800,000	15,600,000	118,600,000
1942.....	159,000,000	22,800,000	15,600,000	120,600,000
1943.....	160,000,000	22,800,000	15,600,000	121,600,000
1944.....	160,000,000	15,400,000	15,600,000	129,000,000
1945.....	160,000,000	15,400,000	15,600,000	129,000,000
1946.....	160,000,000	13,500,000	5,100,000	141,400,000
1947.....	160,000,000	13,500,000	5,100,000	141,400,000
1948.....	160,000,000	13,500,000	-----	146,500,000
1949-1960.....	160,000,000	13,500,000	-----	146,500,000
1961.....	160,000,000	-----	-----	160,000,000

¹ From British Chamber of Commerce Journal, Shanghai, September-October, 1925.

SALT SURPLUS

Other sources of revenue which might be increased for the rehabilitation of Chinese finances are the salt revenue, the wine and tobacco tax, the Peking octroi, and the stamp tax.

The salt revenues come into mind first. The annual collections from this source have varied during the past 10 years from \$70,000,000 to \$85,000,000, but of these collections a constantly increasing share—partly authorized, partly unauthorized—has been retained by the provincial governments. The salt revenue collections, with the amounts retained by the provincial authorities, the amount devoted to obligations secured on these revenues, and the amount released to the central Government is shown for the years 1918-1924 in the following table.

STATEMENT OF SALT REVENUE¹

Years	Total collections	Retained by provincial authorities	Applied on obligations secured on salt revenues	Released to central Government ²
1918.....	\$71,566,000	\$15,546,000	\$4,173,000	\$71,761,000
1919.....	80,637,000	26,341,000	11,622,000	75,213,000
1920.....	79,064,000	23,912,000	13,876,000	64,620,000
1921.....	77,988,000	18,413,000	5,528,000	52,069,000
1922.....	85,789,000	31,669,000	8,051,000	47,193,000
1923.....	79,545,000	30,207,000	9,492,000	41,543,000
1924.....	70,544,000	31,669,000	8,111,000	31,257,000

¹ Statement of the Chinese Government Central Salt Administration.

² This does not represent the remainder after deducting the previous two items from total collections, as certain other charges (transfers, etc.) are met and a balance retained with the administration.

The fixed charges on this revenue are:

(1) The Anglo-French 5 per cent loan of 1908, which requires from 1926 to 1938 yearly payments decreasing from £396,250 down to £261,250.

(2) The 5 per cent Crisp loan of 1912, which requires yearly payments of £327,257 from 1926 to 1952.

(3) Part of the 5 per cent Hukuang loan. This loan is secured on the railway and on the salt and customs revenue, but both sinking fund and interest have been met entirely out of the latter two. Its service requires £391,284 from 1926 until 1951.

The salt revenue is also collateral security for the Anglo-German loan of 1898, the reorganization loan, and the Boxer indemnity, but these charges have so far been met from the customs revenue and therefore may be omitted. In addition, however, it is known that the service requirements on about 40,000,000 yen of the "\$96,000,000" loan is withheld by the Yokohama Specie Bank from salt revenue which otherwise would be released to the Government.

From the foregoing it will be seen that the fixed charges on the salt revenue will continue down to 1938 at around \$8,000,000 to \$9,000,000 annually, depending upon the rate of exchange, and from 1938 to 1952 at between \$4,000,000 and \$5,000,000 annually. Assuming the present rate of collection for the next 25 years and the reduction of the charges to \$5,000,000 beginning 1938, the amount available for debt consolidation and rehabilitation will average around \$32,000,000 until 1938, and \$35,000,000 thereafter until 1952.

OTHER REVENUES

The principal remaining source of revenue is the wine and tobacco tax, on which net collections have averaged around \$15,000,000 yearly. Of these total collections, however, a likewise diminishing share has been remitted to Peking, the amount being in 1919, \$2,673,000; 1920, \$2,299,000; 1921, \$1,784,000; 1922, \$1,449,000. By stopping the dissipation of these funds, a possible \$1,500,000 may be counted on annually.

The Peking octroi has been recently reformed and improved, and annual revenue of \$2,500,000 may safely be estimated from that source.

The stamp taxes amount annually to around \$2,500,000, but of these collections not more than \$200,000 or \$300,000 are remitted to the central Government.

From these three sources annual revenue of \$4,300,000 may be anticipated.

The following table shows the collections of these three taxes for the most recent years available.

Other revenues	1919	1920	1921	1922
Wine and tobacco (net collections) ¹	\$12, 443, 000	\$13, 012, 000	\$12, 722, 000	\$12, 726, 000
Remitted to Peking.....	2, 673, 000	2, 229, 000	1, 784, 000	1, 449, 000
Peking octroi (net collections).....	1, 306, 900	1, 488, 000	1, 691, 000	2, 500, 000
Stamp taxes (net) ²	2, 354, 000	2, 646, 000	2, 522, 000	(³)

¹ Excludes several south and southwestern Provinces. Total collected for all China is estimated at \$26,000,000 silver.

² Peking Government receives only from \$200,000 to \$300,000 per year.

³ Not known.

TOTAL AVAILABLE REVENUE FOR REHABILITATION

Assuming a net return of \$4,300,000 from the wine and tobacco tax, the Peking octroi, and the stamp taxes, a continuation of the salt surplus at around \$32,000,000 until 1938 and thereafter \$35,000,000 until 1952, and an expanding customs surplus according to the table given above, the total available revenues for debt consolidation during the next 25 years will be approximately as indicated in the following tabulation. The fifth column represents the amount necessary for the service of the unsecured debt as consolidated under the proposed plan described on page 286, while the last column gives the estimated surplus available for administrative expenses of the central Government. (The amounts are in silver dollars.)

AVAILABLE SOURCES OF REVENUE FOR REHABILITATION

Years	Customs surplus	Salt surplus	Wine and tobacco tax, stamp tax, and Peking octroi	Total	Estimated service of consolidated debt ¹	Balance available for administration expenses, etc.
1926	\$35,500,000	\$32,000,000	\$4,300,000	\$71,800,000	-----	-----
1927	37,150,000	32,000,000	4,300,000	73,450,000	\$45,000,000	\$28,450,000
1928	39,400,000	32,000,000	4,300,000	75,700,000	49,800,000	25,900,000
1929	53,500,000	32,000,000	4,300,000	89,800,000	64,250,000	25,550,000
1930	56,300,000	32,000,000	4,300,000	92,600,000	68,500,000	24,100,000
1931	58,500,000	32,000,000	4,300,000	94,800,000	72,500,000	22,300,000
1932	67,700,000	32,000,000	4,300,000	104,000,000	94,750,000	9,250,000
1933	78,600,000	32,000,000	4,300,000	114,900,000	97,650,000	17,250,000
1934	80,200,000	32,000,000	4,300,000	116,500,000	100,200,000	16,300,000
1935	85,600,000	32,000,000	4,300,000	121,900,000	102,400,000	19,500,000
1936	87,900,000	32,000,000	4,300,000	124,200,000	104,250,000	19,950,000
1937	90,200,000	32,000,000	4,300,000	126,500,000	105,750,000	20,750,000
1938	92,500,000	32,000,000	4,300,000	128,800,000	106,900,000	21,900,000
1939	94,700,000	35,000,000	4,300,000	134,000,000	107,700,000	26,300,000
1940	96,700,000	35,000,000	4,300,000	136,000,000	108,150,000	27,850,000
1941	118,600,000	35,000,000	4,300,000	157,900,000	108,250,000	49,650,000
1942	121,600,000	35,000,000	4,300,000	156,900,000	108,000,000	51,900,000
1943	121,600,000	35,000,000	4,300,000	160,900,000	107,400,000	53,500,000
1944	129,000,000	35,000,000	4,300,000	168,300,000	106,450,000	61,850,000
1945	129,000,000	35,000,000	4,300,000	168,300,000	105,150,000	62,150,000
1946	141,400,000	35,000,000	4,300,000	180,700,000	53,500,000	127,200,000
1947	141,400,000	35,000,000	4,300,000	180,700,000	-----	180,700,000
1948	146,500,000	35,000,000	4,300,000	185,800,000	-----	185,800,000
1949	146,500,000	35,000,000	4,300,000	185,800,000	-----	185,800,000
1950	146,500,000	35,000,000	4,300,000	185,800,000	-----	185,800,000
1951	146,500,000	35,000,000	4,300,000	185,800,000	-----	185,800,000
1952	146,500,000	35,000,000	4,300,000	185,800,000	-----	185,800,000
1953	146,500,000	40,000,000	4,300,000	190,800,000	-----	190,800,000

¹ Estimate based on debt consolidation plan discussed on pp. 285-286.

GOVERNMENT EXPENDITURE

Various estimates have been made as to the amount necessary for the administrative expenses of the Chinese Government. The Financial Readjustment Commission, in its report of April 16, 1924, which has been adverted to, placed the amount required to carry on the necessary functions of the Government in the neighborhood of \$197,500,000 silver, divided as follows:

Government departments and agencies	Expenditures	
	Ordinary	Contingent
Organs under the central Government.....	\$22, 441, 350	\$2, 748, 192
Ministry of Foreign Affairs.....	4, 048, 428	1, 130, 106
Ministry of Interior.....	3, 446, 932	2, 282, 466
Ministry of Finance ¹	29, 519, 302	6, 878, 455
Ministry of War ²	52, 814, 744	53, 512, 245
Ministry of Navy.....	8, 643, 296	120, 000
Ministry of Justice.....	1, 817, 191	-----
Ministry of Education.....	3, 255, 270	301, 740
Ministry of Agriculture.....	1, 541, 800	410, 447
Ministry of Communications.....	1, 323, 747	149, 218
Bureau of Mongolian and Tibetan Affairs.....	1, 108, 915	50, 000
Total.....	129, 961, 975	67, 582, 86.

¹ Includes customs, \$14,416,256; salt, \$10,866,578.

² The large proportion of ordinary expenditure under this heading (approximately 40 per cent) is worthy of note.

The figures given above may be taken as a liberal estimate, based upon a unified China and providing for future reforms in administration. Monsieur Padoux in September, 1925,¹⁰ considered that, excluding expenditure of various self-supporting ministries and bureaux, a total of \$48,000,000 was sufficient for governmental expenditure under a reconstruction scheme, while others have estimated \$30,000,000 to \$35,000,000 as sufficient to start, increasing gradually as revenue expanded.

From the data and estimates given above it would seem that with the proposed increase in the customs surtax there are sufficient revenues in sight to provide for a consolidation of the unsecured debt and a substantial surplus for the administrative expenditure of the Government. Whether the actual form of debt consolidation will follow the outline indicated above, whether only partial consolidation will be considered, or whether the plan of dividing the unsecured debt into categories enjoying different priorities are problems which are to be met and decided by the customs conference now in session, as is likewise the corollary consideration of what amount is to be considered necessary for the proper administration of the Chinese Government.

SITUATION OF THE RAILWAYS

In the report of the Financial Readjustment Commission no reference to the financial situation of the railways was made except to state that \$187,500,000 silver of Ministry of Communications debts was being transferred to the Ministry of Finance. It is possible, by referring to the official tables published in 1923 by the Ministry of Communications, to describe more in detail the difficulties confronting the railways.

Total obligations as of December 31, 1922, were as follows, all amounts in silver dollars:

Direct obligations of ministry.....	\$43, 692, 571
Railways.....	622, 065, 812
Telegraphs.....	54, 698, 822
Postal service.....	1, 662, 584
Total.....	722, 119, 789

¹⁰ Consolidation of China's Unsecured Debt. British Chamber of Commerce Journal, Shanghai, September, 1925.

According to the report of Mr. Lo Wen Kan, mentioned previously, certain loans contracted by the Ministry of Communications already have been transferred to the Ministry of Finance, as follows:

Loans	Amount in original currency	Rate of exchange	Silver dollars
Ching Yu Railway advance.....francs	9,352,431	7	1,336,061
Kao Hsu Railway loan.....yen	20,000,000	1	20,000,000
Ki Hwei Railway loan.....do	10,000,000	1	10,000,000
Manchurian Mongolian Railways.....do	20,000,000	1	20,000,000
Feng Ching Railway loan.....£375,000	1	10	3,750,000
Feng Ching Railway loan interest.....£22,500	2	9	202,500
Telegraph loan.....yen	20,000,000	1	20,000,000
Telegraph loan interest.....do	2,400,000	2 0.90	2,160,000
Total.....			77,448,561

¹ Rate used by Ministry of Communications.

² Rate used by Ministry of Finance.

Eliminating the above loans and accrued interest, the indebtedness of the Ministry of Communications on December 31, 1922, can be summarized as follows:

Debts	Millions of silver dollars		
	Foreign	Domestic	Total
Direct obligations of ministry:			
Short-term loans and interest.....	0.8	8.5	9.3
Nationalization of railways and interest.....		34.3	34.3
Total.....	.8	42.8	43.6
Railway obligations:			
Share capital and interest.....		2.8	2.8
Mortgage loans and interest.....	411.6		411.6
Obligations with securities and interest.....	49.3	17.5	66.8
Obligations without securities and interest.....	3.2	26.0	29.2
Obligations for materials.....	34.6	5.4	40.0
Obligations unspecified.....	3.3	13.0	16.3
Total.....	502.0	64.7	566.7
Telegraph Department obligations:			
Mortgage loans.....	22.0		22.0
Interest on mortgage loans.....	2.5		2.5
Short-term loans.....	.2		.2
Obligations for materials.....	7.8		7.8
Total.....	32.5		32.5
Postal obligations.....		1.7	1.7
Total indebtedness.....	535.3	109.2	644.5

The above figures include the German issues of the Tientsin-Pukow and Hukuang Railways which, though received by China in the financial settlement with Germany completed in June, 1924, it is understood have not been canceled, and several items of interdepartment indebtedness as follows:

Obligations without securities: Hukuang Railway.....	\$12,945,000
Obligations for materials: Pien Lo Railway.....	496,000
Obligations unspecified:	
Shanghai-Nanking Railway.....	2,653,000
Pien Lo Railway.....	3,453,000
Kirin-Changchun Railway.....	511,000

Total..... 20,058,000

The greater portion (\$567,000,000) of the debt is directly in connection with the railways. Of this railway debt, approximately \$411,000,000 consists of loans classified by the Ministry of Communications as mortgage loans; \$156,000,000 consists of imperfectly or entirely unsecured debt, which includes bills for materials and unpaid accounts of a current nature. The term "mortgage," however, has been used in a loose sense and denotes the naming of some general security, such as "revenues of Government utilities," in the case of the Peking-Hankow redemption loan, or likin revenues in the case of the Tientsin-Pukow original and supplementary loans, rather than a pledge of the railway property itself. Of actual mortgages on railway property, the total is estimated as under \$250,000,000. The Peking-Hankow funded debt, the Hukuang, and the Tientsin-Pukow loans are all secured by pledges of various Government revenues rather than by a pledge of the railway property. It should be observed that the railways underlying these \$250,000,000 of real mortgages are not in particularly difficult straits. It is the other \$317,000,000 of obligations that constitute the real problem.

Some of the short-term domestic debt (about \$12,000,000 silver) bears interest at 18 and 20 per cent per annum. For the most part this is a nominal interest—that is, it is not paid but is added to the present obligation. In order to show how this accumulation of debt has piled up, the following table of debt maturities has been prepared from information contained in the debt schedules of the ministry, and amortization tables for the years 1923 to 1928, inclusive. The debt maturities, including interest, are as follows:

Debt maturities	Millions of silver dollars					
	1923	1924	1925	1926	1927	1928
Railways:						
Mortgage loans.....	52.3	34.5	31.0	34.5	32.0	¹ 34.1
Obligations with securities.....	22.2	11.0	1.4	0.2	0.2	0.2
Obligations without securities.....	7.1	0.9	0.6	0.6	0.6	0.6
Obligations for materials.....	39.3					
Obligations unspecified.....	4.8					
Total.....	125.7	46.4	33.0	35.3	32.8	34.9
Telegraphs:						
Mortgage loans.....	² 6.6	12.9	1.6	1.6	1.5	1.5
Materials.....	7.8					
Short-term loans.....	0.2					
	14.6	12.9	1.6	1.6	1.5	1.5
Grand total yearly maturities.....	140.3	59.3	34.6	36.9	34.3	36.4

¹ Includes interest and amortization, Kia-Tsi (Shantung) Railway loan on 10-year redemption basis.

² Includes \$2,214,000 supposed to have been transferred to railways.

In studying this table it should be remembered that during 1923 and 1924 practically nothing was paid on the railway debts except on mortgage loans. Therefore, there has been a large carry-over from these years. If we assume that the mortgage loans were paid in full during 1923 and 1924, and that payments were not made on the other items, then the cumulative maturities due in 1925 would amount approximately to \$147,400,000 silver.

The net income of the railways to meet these charges has been inadequate. In 1922 the net revenue collected was approximately \$34,000,000 silver. The postal service earned a net above expenses and development of service charges of about \$2,000,000 silver, giving the ministry a total net income of about \$36,000,000 silver. This was not increased during 1923, and in 1924 it was less than the above amount. It is apparent, therefore, that if the creditors are to secure payment of their accounts and the Government be saved the ignominy of collapse and repudiation, plans must be made at a very early date to bring railway revenues more into line with debt-service requirements. To make this financial feat possible, three fundamental conditions which do not now exist are necessary: (1) Peace and order within the country; (2) adoption of budgets and adherence to same by railway management; and (3) use of communications' funds for communications' purposes only. Given these conditions the demonstrated earning capacity of the railways and telegraphs appears sufficient to extricate them from their present embarrassing condition.

Referring again to the table of debt maturities, it should be noted also that the charges for 1923 and 1924 are abnormally high, owing to the inclusion for these years of large amounts of unsecured floating obligations. If these were cared for in a consolidated long-term funding operation adequately secured, the financial position of the railways and telegraphs would be fairly satisfactory in comparison with their normal income, but their normal income is not being received. The best indication of how military disturbances within the country during the latter part of 1924 affected railway income is afforded by the following comparison of actual net operating revenues for 1923 with approximate revenue for 1924 of the more important lines:

CHINESE GOVERNMENT RAILWAYS ¹

Railways	Net operating revenues	
	1924 (approximate)	1923 (actual)
Peking-Hankow.....	\$16,000,000	\$19,347,647
Peking-Mukden.....	5,366,510	6,951,447
Tientsin-Pukow.....	7,912,007	9,135,644
Peking-Suiyuan.....	2,567,000	2,667,018
Shanghai-Nanking.....	3,492,094	3,613,715
Shanghai-Hangchow-Ningpo.....	1,346,305	1,150,131
Cheng-Tai.....	2,292,867	2,713,949
Canton-Kowloon.....	² 43,000	² 61,257
Kirin-Changchun.....	750,000	938,164
Taokow-Changhwa.....	1,074,840	831,932
Lung-Hai.....	2,000,000	2,052,918
Kaifeng-Honan.....	1,182,000	1,310,052
Hupeh-Hunan.....	115,042	² 73,249
Chuchow-Ninghsiang.....	7,600	² 113,000
Ssu-Tao.....	1,724,119	1,098,168
Kiaochow-Tsinan.....	3,702,770	3,004,898
Total.....	49,929,554	54,568,177

¹ Source: C. S. Liu, Director of Railway Department, Ministry of Communications, Apr. 1, 1925.

² Deficit.

The only logical conclusion that can be reached while present conditions continue in China is that the unsecured foreign debts of the

Ministry of Communications should receive consideration on an equal footing with all other unsecured debts of the Government in any plans that are devised for readjustment.

The international character of the obligations has been indicated in a general way in this study, though without specific reference to the unsecured debts owed to any single country. The principal currencies involved are pounds sterling, gold dollars, yen, and francs. These are also the currencies used by the nations which are members of the International Consortium for China. It would seem to be a natural function of the consortium, therefore, to carry out whatever funding operation is finally decided upon.

THE OLD CONSORTIUM

In 1913 the Chinese Government floated a reorganization loan through a consortium of banks in five nations known as the "Five-Power Group." Under the terms of this loan contract the Chinese Government agreed to give the lending banks the option of undertaking future loans issued by the Government at a commission of 6 per cent when secured by a tax on the revenues of the Salt Administration or when issued for the same purposes as named in the reorganization loan agreement. The European war disrupted the "Five-Power Group" organization, and the Chinese Government has since borrowed through other channels, having received a number of loans from the United States and Japan.

THE NEW CONSORTIUM

In 1918 a new consortium for China, representing bankers of Great Britain, France, Japan, and the United States, was proposed. The new consortium received the sanction of the State Department at Washington in the following terms (letter to the bankers, July 9, 1918):

The formation of a four-power group, to consist of financial interests of the United States, Great Britain, France, and Japan, to deal with the Government of China for the purpose of making loans to that Government seems advisable. If the terms and conditions of each loan are submitted to and approved by this Government and the other cooperating Governments and by the Government of China, this Government would not only interpose no objection, but, on the contrary, would consider such an arrangement an assurance that the welfare of China and the proper interests of the other Governments were of such a mutual character as to permit of close and friendly intercourse for their common good. * * * This Government would be opposed to any terms or conditions of a loan which sought to impair the political control of China or lessen the sovereign rights of the Republic.

On October 8, 1918, the State Department announced to the French, British, and Japanese Embassies that 31 banks had joined the American group and were representative of all sections of the country.

The principal terms of the new consortium agreement, dated October 15, 1920, are summarized in the China Year Book, 1923, on pages 774-777.

The execution of the consortium agreement and its confirmation and approval by the four Governments whose banking groups were signatory to it were made known to the Chinese Government by official communication dated January 18, 1921, signed by the min-

isters to China of the four Governments concerned. The Chinese Government, however, has not accepted the consortium agreement, and is not a party to it (January, 1926).

At the meeting of consortium representatives held in London, July, 1924, the organization was made perpetual, with the proviso that any member might withdraw by giving 12 months' notice to the other members.

THE NATIVE (CHINESE) CONSORTIUM

Another important financial development was the formation in 1920 of a Chinese banking group headed by the Bank of China and comprising 27 of the leading native banks. The combined authorized capital of these banks is \$150,000,000 silver, and their paid-up capital is estimated as \$65,000,000 silver.¹¹

Early in 1921 a conference of the native consortium at Tientsin passed the following resolutions relative to future loans to the Government:

1. Loans are not to exceed one-half the value of the revenues assigned or securities pledged.
2. Value of revenues assigned or securities pledged must be stated, and stocks or bonds pledged must have a fixed date of redemption.
3. Positively no loans are to be made without adequate guaranties or security.
4. No sum of any considerable amount is to be advanced to the Government before a loan agreement is signed.
5. Payment of interest must not be deferred.
6. Redemption of principal must be made as it falls due; on no account is payment to be deferred or the loan refunded.

Later in 1921 the native consortium presented to the Government a series of memoranda covering the following points: (1) That the Government afford opportunity to the native consortium to finance any proposal that it might be the purpose of the Government to take up with the international consortium; (2) that measures be taken for the unification of the Chinese railways under centralized control; (3) that the Chinese currency system be reformed by the adoption of a gold standard, the abolition of the tael, the unification of the currency, and the control of note issue by the Government.

In extending loans to the Government the native consortium has tried to insist that satisfactory assurance be given that the money borrowed should be expended for the purpose for which it was loaned and for no other, and that it should not be applied to current expenses or to administrative purposes. Two loans of the Government in 1921 were financed by the native consortium, the first being the railway-car loan for \$6,000,000 silver and the second the Shanghai Mint loan for \$2,500,000 silver, in both of which the banking group retained in its own hands the proceeds of the loans and disbursed them direct to the contractors, reserving the right of veto on all contracts. In the case of the railway-car loan the native consortium reserved the right to inspect the cars periodically and insure proper maintenance; to receive direct remittances to meet the service

¹¹ Details of the organization of the member banks of the Chinese consortium may be found in Appendix B of "Currency, Banking, and Finance in China," by Dr. Frederic E. Lee.

of the loan from the railways to which the rolling stock had been assigned; to deduct interest from funds remaining in its hands in case of default; to hold as contingent security a lien on the surplus revenues of the Peking-Hankow Railway; and to audit and publish the accounts of that railway. Military interference with the railways and the Government has prevented the banks from putting into effect these protective stipulations.

CONCLUSION

This report is intended to present only a broad outline showing the general financial condition of the central Government. That the Government is temporarily unable to realize upon many of its existing assets, and so is unable to pay immediately the interest and principal of its debts is evident. It would be wrong, however, to leave the impression that the situation is hopeless or that the Chinese themselves can not improve it. There is more wealth now within the country than at any previous time in the nation's history, but trade is hampered by a multiplicity of restrictions and exactions probably never equaled elsewhere in the world. Furthermore, as China does not yet enjoy tariff autonomy, because of existing treaties and the complications of loan agreements, the situation is complicated.

To bring about permanent improvement of the Government's finances, political and constitutional changes are involved that China must work out for herself.

As has been shown, the total unsecured indebtedness of the Government has reached the point whereby the action of interest alone it increases nearly \$100,000,000 silver per year. The total cost to China of a continuation of the present situation is thus almost \$10,000,000 silver a month.

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PROBLEMS OF FOREIGN CAPITAL IN CHINA

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Among the economically less-advanced areas of the world China is peculiar in that it is not a new country awaiting the beginnings of an ordered civilization, like much of the African and South American continents; it is a country of dense population, not only with a distinctive culture and a high degree of social organization, but already possessing a very considerable industrial, commercial, and financial development of its own. Industrial enterprises, therefore, and more especially the modern means of communication, such as railways and steam shipping, find in China a field already plowed and harrowed for the sowing. Once built with honesty, and operated with even a minimum of efficiency, a railroad in China pays for itself almost from the beginning. Its course lies through a region already under intensive cultivation, and through towns which immemorably have possessed local industries, whose opportunity for expansion has hitherto been limited by the enormous transportation costs incident to the old methods of conveyance by donkey, by camel, or by wheelbarrow; and within reach of it dwells a population more densely settled than in any region of the world, except perhaps some portions of northwestern Europe. A railway in China has not, therefore, to develop the country which it is to serve and from which it is thereafter to derive its revenue. The economic problem which it presents is rather one of adjustment and development, which takes place automatically as between the industries and the markets of the region which has been awaiting this quicker and cheaper means for the disposal of its products.

China is also peculiar among the economically less-advanced areas of the world in that its development through foreign capital has been undertaken, not by the nationals of any single power, but by various nationalities simultaneously—some of them inspired by political at least as much as by economic motives. Among these powers the Chinese Government has intrigued, playing off one foreign influence against another, and offsetting concessions to one set of interests by "compensations" to other interests. This has resulted in a haphazard development, neither continuous nor consistent, often ignoring economic necessities in favor of considerations of immediate political expediency. It has, moreover, had other results more positively dangerous alike to Chinese interests and to the interests of the foreign investing nations. It has from time to time resulted in acute international rivalries which have in turn led to an accentuation of particularistic and exclusive designs, such as have found expression in the various claims to so-called "spheres of interest," or, as they are sometimes designated, "spheres of in-

fluence." Under these conditions, economic and political motives have interacted one upon the other, and have become blended and confused to an extent that is perhaps not equaled elsewhere in the world.

As has been said: "Financial, economic, and industrial concessions have been made the objects of international policies; such advantages have been sought by governments—both directly, in the form of general conventional stipulations, and indirectly, in the form of special grants to particular banks or industrial organizations—through all the means available to one state in its intercourse with another; the holders of such concessions have often spoken with the voice of their governments in insisting upon their own construction of the rights granted to them; and such commitments to individuals of one nationality, even when left unutilized and allowed to lapse by the terms of the concessions, have now and again been claimed as a basis of protest against a grant to the nationals of any other country. The result of this merging of individual with governmental interests has been that matters which would elsewhere be of merely commercial character, susceptible of judicial determination in case of dispute, are in China matters of international political concern, for the settlement of which the ultimate recourse is to diplomatic action. It is thus in a sense true that the international status of the Chinese Government is determined and conditioned by its business contracts with individual foreign firms or syndicates, scarcely, if at all, less than by its formal treaties with other governments."

It would be unfair, however, to convey the impression that the reliance of China upon foreign private capital is intrinsically bad or harmful to Chinese interests. Harm has indeed been done to the interests both of China and of the other powers in certain cases in which nations ambitious of political advantage, or of exclusive economic position, have insisted upon an admixture of uneconomic elements designed to serve ulterior ends. This is, of course, most marked in cases involving encroachments upon the territorial or administrative integrity of China, or upon the principle of the open door or equality of economic opportunity for all nations in China. It has been exemplified particularly in connection with certain railway lines constructed by nominally private enterprise—enterprise, however, which was in fact a disguised agency of government, assuming to exercise within Chinese territory the administrative and fiscal functions of a government, and insisting upon a fantastic reverence for the sacredness of its property rights. Along their right of way such railway companies have assumed to nullify the treaty rights of foreign residents in China, to assume jurisdiction over their persons and property, and to levy taxes upon them; and the railway right of way has been treated as so far identified with the national territory of the foreign company that roads could not be built across it, nor could Chinese troops in hot pursuit of bandits be permitted to trespass upon the line even for the purpose of putting down lawlessness. But these are instances not of the harmfulness of private financial enterprise in itself, but of the perversions which have from time to time occurred in consequence of the desire of governments to use business enterprises as pretexts for political penetration.

In those cases in which foreign economic developments in China have been left free of political designs, however, and allowed to develop with a sole view to the security of the bondholders and the success of the enterprise, the record is on the whole one which China is not warranted in resenting, and in which the operations of international finance appear in a favorable light. Even where the safeguards have involved a degree of foreign supervision over Chinese revenues (so as "to touch very nearly the administrative independence of China," as it was put by President Wilson in the public announcement of withdrawal of support from the American group of the consortium, in 1913), it must in fairness be admitted that the arrangements of this sort actually made up to the present time have more than justified themselves by the inestimable service which they have rendered to the Chinese Government. One has but to point to the international services established in connection with the Maritime Customs and the salt revenues.

The customs service, as is well known, had long ago grown up as a result of historical circumstances, under the organizing genius of Sir Robert Hart; but in connection with the Anglo-German loans of 1896 and 1898, made for the purpose of paying the Chinese indemnities to Japan after the war of 1894-95, it was stipulated that the system of foreign supervision over the administration of the customs should remain unaltered during the life of these loans, which were charged upon the customs revenues; and the provisions of these loan contracts, therefore, constitute the basic agreement with regard to the continuance of the present system of international supervision over the customs administration. In 1913 a similar service, of an international character, was provided for by the terms of the reorganization loan, in connection with the security of that loan upon the revenues of the Salt Gabelle. Both of these organizations have rendered to the Chinese Government loyal and efficient service, of which they may well be proud, and which has won for them in an extraordinary degree the confidence of the Chinese people.

In a brief review of the operations of private financial enterprise in China, it is possible to deal only with a few of those aspects of the problem which are fundamental and peculiar to the case of China. This paper will therefore confine itself almost exclusively to the question of railways, making only incidental reference to the important series of administrative loans by which China was enabled to meet the indemnities imposed upon her as a result of the war with Japan, and by which after the revolution of 1911 she was supplied with the means of organizing and consolidating the new Republican Government. It will be necessary to leave almost without comment the activities of the original consortium—a combination of American, English, French, German, Japanese, and Russian banking interests—which in 1910 and the following years took so momentous a part in establishing international financial cooperation in China, but which dealt solely with administrative rather than with industrial financing.

From the time, 30 years ago, when China first had recourse to foreign capital to aid in her internal development, there has grown up a sharp though somewhat artificial distinction between loans for the general purposes of the Government, conveniently designated as

administrative loans, and those devoted to industrial developments undertaken by the Government—these so-called industrial loans being in practically every case for the purpose of railway construction.

The building of railways was a task for which neither the Chinese Government nor the Chinese people were competent by training or tradition. They lacked the necessary technical education and experience, and were not familiar with the kind of cooperation on a considerable scale which is necessary for public works or corporate undertakings. Without undue reflection upon the Chinese people, it may be recalled that their standards of public or corporate responsibilities as trustees have never been developed, as in the case of western nations. For reasons peculiar to their social and political fabric, the Chinese have developed standards different from our own—in some respects more punctilious than those of western peoples, but involving none of that regard for the sacredness of a trust which is so conspicuous in the legal and moral concepts of the Occident. To risk a generalization so broad that it must necessarily be at least partly faulty, one might say that the Chinese are singularly conscientious about the obligations of a debt, but equally unresponsive to the obligations of a trust. This has been evident in such corporate activities as the Chinese have undertaken during the past generation. Directors of corporations have not felt any inhibition upon their borrowing corporate funds for the purpose of speculation, in stocks or in exchange, for their personal profit. It has resulted that Chinese corporations have frequently ended in bankruptcy through some fluctuation in shares with which the corporation itself was in no wise concerned.

As the result of these and other handicaps, Chinese financiers have never yet succeeded in building a railway; and the failure of the effort in the case of the Province of Szechwan railway was so conspicuous and so disappointing that it constituted one of the causes which brought on the Chinese revolution in 1911. Nor has the Chinese Government itself ever built more than a few odd miles of railway, except in the case of the Peking-Kalgan line, which was indeed a fine technical accomplishment and a successful enterprise, but which during the past few years has been made the sport of political and personal ambitions, until at present it has lost its original independence of foreign influence and has become almost irretrievably burdened with debts.

Apart from certain more or less experimental efforts, the first railway concessions in China were in the strict sense of the word "concessions." They involve the grant, to foreign interests, of the right to build and exploit railways in Chinese territory as foreign enterprises independent of the Chinese Government. To this group belong the Chinese Eastern Railway (the Russian Government's agency of penetration in Manchuria), the German railway in Shantung, and the French railway in Yunnan. These railways, however, are examples of what was in fact a governmental activity, rather than of the use of private capital; and they were possible of development only in connection with adjacent territorial possessions, of which they served as extensions.

In regions more remote from foreign territorial possessions there was an opportunity for the development of a type of contract which

has become known as the underwriting contract or bankers' contract. This type of contract provides for a loan to be floated in the foreign money markets by the bankers as underwriters. The bankers then have the railway built for the Chinese Government; they choose the engineer themselves, as also the auditor to supervise the expenditures. In the earlier contracts of this type, the loan was secured upon the railway itself, and under the guise of joint foreign and Chinese supervision the bankers in fact retained what was an effective control of the operation of the railway. But, beginning with the Anglo-German contract for the Tientsin-Pukow Railway, in 1908, this type of contract has been modified by omitting the mortgage upon the railway, and by relaxing foreign supervision in engineering and auditing after the line has been built. With many variations in detail, this is the general basis upon which the railways in China have been built by foreign private capital.

Without attempting too detailed an analysis, it may be pointed out that the essential elements of foreign supervision, alike over construction and operation of railroads of this type, are embodied in these so-called "engineering rights" (the right of the bankers to have the road constructed under the direction of an engineer nominated by them), and "auditing rights" (the control of expenditure, during construction, by a financial representative of the bankers). Closely connected with the "engineering rights" is the question of a preference for materials and equipment manufactured by firms of the same nationality as the bankers. In many of the contracts of this type, provision is made for the establishment of a purchasing agency, which, for a fixed commission, is to purchase all material required for the construction and operation of the line. In practice this has usually meant that all material for the road was purchased from a firm affiliated with the lending bank. Even where no such provision exists, however, it generally works out in practice that the necessary material for the road is supplied by the industry of the country which furnished the money and which nominated the engineer in chief. The tendency presents a real difficulty only in cases where several nationalities have cooperated in the building of a line. An attempt to obviate this difficulty was made in the case of the Hukuang Railways, in the construction of which American, British, French, and German capital participated. Sections were allotted to the several nationalities, but the contract provided for an "impartial preference," on all the sections, for the materials of all the lending nationalities. It was assumed that free competition among the manufacturers of the four interested countries would obviate any disposition on the part of the various section engineers to favor materials of their own nationality. But the theory found in human nature an obstacle to its successful realization. The whole training of an American engineer makes him look askance at the rigid type of locomotive suitable to English railways, which in his opinion are wholly impracticable for such pioneer lines as are required to-day in China; and he regards as a mere extravagance the eternally substantial British type of bridges, with their rivet holes individually drilled by hand. The British engineer, on the other hand, trained in the practice of a country where the railroad system has long ago ceased to cover new territory and devoted to

the perfection of the existing system, regards with complete contempt what he considers the jerry-built rolling-stock and bridge work of his American colleague. Here is an honest difference of views which presents one of the most difficult of the problems incident to international financial cooperation in railway development in China.

It is difficult for us to realize the extent to which the construction of a railway in China constitutes a new focus for the whole economic life of the area traversed. In the present rudimentary stage of the country's railroad development there is almost nowhere any competition by rail or by water. The construction of a new line gives an outlet for industries which theretofore had never dreamed of being more than merely local. Inevitably, the whole economic and commercial organization of the district crystallizes around the new line. Districts that were formerly as remote from each other as China is from us, suddenly have rapid intercommunication. And this new facility, for conference and for the dispatch of troops and supplies, brings the Government and the people into closer, though not always more harmonious, contact than was possible before.

It is not strange that these wonder-working lines of steel rails, which were to so large an extent subject to the control of one or another foreign interest, became each the nucleus of an influence which was both economic and political. They became, in fact, the primary means of economic and political penetration of China by the several powers; and each became, at least potentially, the basis for the assertion of a sphere of influence and for consequent claims to "special interests" and a particularly favored position. Such claims were at times asserted consciously, with a deliberate implication that the property interests involved were such as required for their protection the acknowledgment of privileges superior to the governmental rights of China and to the treaty rights of third parties. There have also been occasions where the foreign control of railways, without actually asserting any superior rights, has nevertheless resulted in practical trade advantages to citizens of a given nationality, as against all others. These discriminations have seldom been so pronounced as to present a concrete issue. More often they have taken the form of through traffic arrangements which were in practice available only to shippers of a particular nationality, and of technical formalities in regard to applications for cars, customs declarations, way-billing arrangements, and the like. Frequently these discriminations have been the result not of deliberate policy, but of an attitude of self-conscious nationalism on the part of subordinate employees who regarded with interest and zeal the consignments covered by documents in their own language. But whether one considers these practices as warranted or unwarranted, the result was that railway lines came to be identified with claims to spheres of interest where, as the years went by, the trade and enterprise of third countries found themselves more and more excluded, and in which more and more definite claims to paramountcy or predominance of influence were asserted in behalf of the nationalities originally concerned.

It was in the attempt to remove these tendencies toward national discrimination that Secretary Knox in 1909 proposed his plan for the so-called neutralization of railways in Manchuria. The plan provided that the interested countries—including Russia and Japan, which possessed railways in that region, and the United States and Great Britain, whose nationals held contracts for railway construction there—should pool their interests with a view to establishing a single system of railways to be operated by an international syndicate. In the light of what is now known regarding the arrangements existing among the powers at that time, it is evident that this plan never had any prospects of success. It was in fact supported only by Germany, which, like ourselves, was an outsider to the arrangements by which France, Great Britain, Japan, and Russia had arrived at a mutual accommodation of their respective interests on the Continent of Asia.

Even in its failure, however, the Knox proposal gave an impetus toward international cooperation among the powers most interested in questions of Chinese finance. So far as concerned railways, this cooperation found expression only in the joint financing of the Hukuang Railways by capital from the United States, Great Britain, France, and Germany. For the purpose of administrative loans, however, the bankers of these four countries and of Japan and Russia associated themselves, in 1909, in what has become known as the consortium. The American group dropped out in 1913; but the remaining five powers went on with the flotation of the reorganization loan, which marks an epoch of progress in that it caused the development of the Salt Gabelle, a producer of revenue almost as dependable as the customs. The consortium did not attempt to deal with industrial loans, however, and therefore failed to contribute anything toward the solution of the problem created by the railways as agencies of economic and political penetration. The difficulties of this problem became accentuated with the passage of time until in 1917, when an American firm obtained contracts for the construction of a number of lines in different parts of China, it met with protests from Russia against its building of a line northward and westward into Mongolia, from France against its building of a line southward into Kwangsi, and from Great Britain against its building of a line from the lower Yangtze Basin westward into Szechwan. In each case the American projects were held to conflict either with a general superiority of rights in the region in question or with the particular privileges of a corporation which claimed that the new line would be in effect an extension of a railway which it had contracted to build. It is not to be wondered at that the American contractor in question, in the course of a conversation in which certain of the opposing interests pointed out to him the extent of their several spheres of interest, scrutinized the map with some puzzlement and finally asked, "Then where is China?" The crux of the whole difficulty appears in the fact that in each case the Chinese Government, which had selected these lines for development by the American company, actually asked the contractor to forego work on them, in the hope that later opportunities for his enterprise might be found which would not raise an issue with the claims of other nationalities.

This was one of the conditions which the American Government had in view when, in 1920, it proposed to the British, French, and Japanese Governments that the consortium should be reconstituted, or rather that there should be formed a new consortium, which should deal not only with administrative loans but with loans for such industrial enterprises as railways in China. It was proposed that the several national groups should pool into the common resources of the new consortium such rights as they possessed with regard to the construction of railways and similar enterprises. For a time, there was determined opposition to this proposal on the part of the Japanese Government, which declared itself unwilling to authorize its nationals to enter into this form of international cooperation unless Manchuria and the adjacent portion of Mongolia were excluded from the activities of the new consortium. The ensuing consultations among the interested governments involved a consideration of Japan's claim to special interests in the area in question; but in the end, when it had been made clear to Japan that the proposal did not contemplate the surrender to the consortium of vested interests in railways which were already in operation as going concerns, the Japanese Government gave its consent to the participation of its bankers in the new consortium, the understanding being that each national group, while retaining its individual rights with respect to all railways actually constructed or which had made substantial progress toward completion, should pool all of its contracts for enterprises which had not yet been seriously taken in hand. The new consortium thus furnishes a means by which future railway construction in China may be made a matter of general international concern, and divorced from particular political pretensions.

The Chinese Government has not yet seen fit to avail itself of the facilities offered by the new consortium. But if and when the Chinese are ready to deal with it, it will be in a position to make the requisite funds available for them under conditions far less dangerous or subversive to Chinese sovereignty than those effective in the past. Not only will any railway so constructed be purged of implications that it is the basis of a claim to a sphere of influence, but the very fact of its construction under these auspices will negative any such claim heretofore asserted in that region. In the meantime, the mere fact of the consortium's existence as the result of an agreement for international financial cooperation has been of real service in arresting the tendency of railway contracts to establish rights partaking of the nature of a protectorate.

Closely related to this question is that phase of the work of the Washington Conference on the Limitation of Armaments which dealt with the principles and policies to be adopted by the participating powers in their relations with China. Most of the decisions of the conference in this regard were embodied in one of the treaties concluded on February 6, 1922. That treaty is not yet technically in force, as it awaits the ratification of France; but the principles which it incorporates have been adopted and followed by all the interested governments as fully and as punctiliously as though the treaty had in fact become the law of the land for all the participating powers. Perhaps, then, while we are awaiting the ratification of France (which it is to be assumed will in due course be given) even the strict

legal constructionist will pardon a reference to that treaty as though it had actually entered into force. The treaty not only accepts the mutually dependent principles of the open door and the integrity of China—formulas which, like a worn coin, had lost all distinguishing marks—but it also makes precise provisions for certain applications of these doctrines; it expressly discountenances claims to spheres of influence; and it gives to the doctrine of the open door, or equality of economic opportunity in China, a definition more precise and more far-reaching than has ever hitherto been attempted. In connection with the treaty, the conference adopted a resolution which should go a great way toward clearing away the atmosphere of secret intrigue which has so often surrounded foreign enterprise in China, by providing for the practically immediate publication of all contracts for concessions from the Chinese Government or from the Provinces.

With the consortium available as a means of international cooperation, and with the open door principle of fair play accepted and defined by mutual agreement, the way is open for a healthy and normal development of the resources and opportunities of China through the participation of foreign capital on a genuinely economic basis, to the advantage of China at least as much as to the profit of foreign investors. It is to be hoped that we are on the eve of an economic development which will take account of the fact that a fair bargain is profitable to both parties, and that no nationality need strive to establish exclusive claims through fear that it must suffer loss in consequence of another's gain. We know that the wealth of China, particularly in mineral resources, has been exaggerated to the point of fable, but it may well be doubted whether, in our dreams of a Chinese Eldorado, we have ever adequately realized the more substantial, because inexhaustible, wealth that lies not in the soil of China, but in the industry, the intelligence, and the fine character of the Chinese people. These are resources which are capable of an incalculable wealth-making power. China, for its own good no less than for the good of those who look forward to supplying its growing market with their commodities, is destined to provide opportunities such that no nationality need have occasion to grudge what falls to another for development.

At present the obstacle to such a development is the prevailing political chaos in China, and the accompanying disintegration of administrative authority. This is doubtless a crisis through which China is compelled to pass as a result of the political and social traditions formed by her people during the longest coherent history of any nation now extant. One may feel discouraged that the end of this period of disorganization is not yet in sight. But no one familiar with the fine qualities of the Chinese people can doubt that there will eventually be a reintegration of their national life. When that time comes, China will inevitably pattern herself more and more closely after our western world, and of course largely through the means provided by foreign capital. The way in which foreign capital meets its responsibilities in serving the ends of the new China will, more than any other factor, determine the solution of that greatest of all problems confronting mankind—the relationship that is to exist between the civilizations of the East and the West.

RAILWAYS IN CHINA

By J. E. Baker, Adviser to the Chinese Ministry of Communications

The railways of China and its dependencies do not exceed an aggregate length of more than 7,500 miles. For the most part they are confined to the coastal plain and Manchuria, although there are a number of small lines scattered throughout the country. These railways are as follows:

Lines ¹	Location	Miles of line	
		Contigu-ous	Scat-tered
MANCHURIA			
1. Chinese Eastern.....	North Manchuria.....	1,078	
Timber concession lines in connection.....	do.....	286	
2. Tsitsihar (narrow gauge).....	do.....	18	
3. South Manchuria.....	South Manchuria.....	681	
4. Ssu-Tao.....	Central Manchuria.....	266	
5. Kirin-Changchun.....	do.....	77	
6. Peking-Mukden (outside wall).....	North China.....	324	
Branches (privately owned).....	do.....	56	
Mining railways.....	do.....	21	20
COASTAL PLAIN			
6. Peking-Mukden (inside wall).....	North China.....	293	
7. Peking-Hankow.....	Central China.....	822	
8. Tientsin-Pukow.....	do.....	691	
9. Shanghai-Nanking.....	Yangtze Valley.....	204	
10. Shanghai-Hangchow.....	do.....	131	
Ningpo section.....	do.....		49
11. Peking-Suiyuan.....	Northwest China.....	461	
12. Cheng-Tai.....	Shansi.....	152	
13. Taokow-Chinghwa.....	Honan.....	95	
14. Lung-Hai (including Kaifeng-Honan).....	do.....	446	
15. Hupeh-Hunan.....	South Central China.....	264	
16. Chuchoo-Pingsiang.....	do.....	56	
17. Shantung (Kiao-Tsi).....	Shantung.....	283	
18. Chung Hsin Mining Co.....	do.....	32	
Mentowkow-Chaitang.....	Peking.....	38	
Nanking City.....	Nanking.....	5	
Foshan Light Railway.....	Shantung.....	14	
19. Kiukiang-Nanchang.....	Kiangsi.....		79
Tsiching Mining Railway.....	Hupei.....		15
Shantung Wen.....	Shantung.....		42
Lün-Kiang Yangho.....	Chihli.....		14
Yu Ning.....	do.....		23
Ching Shih.....	do.....		18
Tschesien Ya Lu.....	do.....		19
Lung Yen Iron.....	Chihli.....		13
OTHER PARTS OF CHINA			
20. Canton-Kowloon (including British section).....		119	
21. Canton-Samsui.....		30	
22. Changchow-Amoy.....	Fukien.....	18	
23. Kwangtung.....	North of Canton.....	141	
24. Sunning.....	Near Canton.....	93	
25. Chaochowfu-Swatow.....		26	
26. Yunnan.....	Southwest China.....	288	
Ko Chu Pishih.....	Yunnan.....	33	
Miscellaneous mining lines.....		140	

¹ Numbers refer to railway map and serve as a guide to location.

In Manchuria the railway lines, though continuous for the most part, do not constitute a single system, but rather three systems—the Chinese Eastern, the South Manchuria, and the Government Railways. The two Government-owned lines, the Kirin-Changchun and the Ssu-Tao, connect with the South Manchuria only and are operated by it as branch lines.

At Changchun the South Manchuria line forms a junction with the Chinese Eastern, but between them there is an unbridgeable break due to the fact that the Chinese Eastern track is built to the 5-foot gauge of the Russian State Railways, while the South Manchuria follows the standard Chinese gauge, 4 feet 8½ inches. At Mukden, where the South Manchuria joins the Chinese Government railway system, there is another break. The lines have the same gauge, but the automatic coupler on the Chinese railways is 6 inches higher, owing principally to the greater wheel diameter on the Chinese rolling stock.

The lines of the coastal plain form a continuous system of over 3,500 miles. However, this continuity is broken in a physical sense by the Yangtze River, over which there are neither bridges nor car ferries. Out of the 3,541 miles of railway on the central plain, but 650 miles of the continuous system are south of the Yangtze. Most of the short industrial lines north of the river connect with the trunk lines, but south of the river such short lines lead to ports rather than to railways.

Radiating from Canton are three short lines, which in time should be merged into a regional system corresponding somewhat to the systems that serve the coastal plain and Manchuria; but at present these lines must be regarded as in the category of scattered lines, for none of them is continuous with another, and their combined length is less than 300 miles.

HISTORICAL SURVEY

From the inception of the idea of railways in China to the present is about 60 years. The first efforts to build railways in China were put forth in Shanghai even before the close of the Taiping Rebellion (1864). The merchants of the port—foreigners for the most part—presented a petition to the great Viceroy, Li Hung Chang, for permission to build a railway to Soochow. The petition was emphatically denied; but the agitation was immediately renewed, only the line fostered was in the opposite direction—that is, from Shanghai to Woosung. After 10 years of effort, a charter was obtained by Jardine and Matheson, a British firm, and on January 20, 1876, the first rail was laid.

The track was of but 30-inch gauge; and the locomotive, the "Pioneer," which ran upon it for the first time on the 14th of February, weighed less than 1 ton. A dispute arose as to the right to use a locomotive. Some time later a Chinese, evidently determined on suicide, was run over by the train. This incident was used to such good effect that Jardine and Matheson were forced to sell out to the local authorities, who tore up the track and shipped it, together with the rolling stock, to Formosa, where it was dumped on the beach. This was the last of railroads around Shanghai for some years.

In the meantime, Li Hung Chang had been transferred as Viceroy to the Province of Chihli. His friend, Tong Kin Sin, had organized the China Merchant's Navigation Co., which was conducting a coastwise trade in steamships in competition with foreign shipping, but the company was in difficulty because of the high price of coal. The Tongshan mines which produced it were so far inland that the cost of transportation rendered its price at Tientsin practically prohibitive. English engineers convinced Tong that his remedy lay in building a railroad, and, accordingly, a petition was presented to Li Hung Chang for permission to build from Tongshan to Peh-tang, at the mouth of the Pehtang River. Li Hung Chang was entirely favorable, but political enemies at court were to be found in opposition, and although Li was in high favor he could obtain imperial sanction for only 6 miles of line, which connected the mines with a canal built to Hsukuchuang.

This line was laid out with standard gauge of 4 feet 8½ inches, the foreign engineers being inspired with the idea that it was the nucleus of a continental system. The only motive power contemplated in the charter was that of animals or men; but with the same enthusiasm, the engineers set about the construction of a locomotive out of a stationary boiler and channel iron, together with wheels which had been shipped in as "old iron." On June 9, 1881, the one-hundredth anniversary of the birth of George Stevenson, this engine was christened the "Rocket of China" and given its first run over the 6 miles of track then in existence. While the run of the "Pioneer" at Shanghai antedated that of the "Rocket of China" by more than 15 years, the latter was the first locomotive run on a permanent railway in China.

It was five years before the attempt to extend the line was successful. The Kaiping Railway Co. was formed with Wu Ting Fang (later Minister to the United States) as president, and on April 12, 1887, a railway prospectus was issued soliciting subscriptions for the purpose of building the line to Tientsin. This purpose was accomplished in 1889, but in the meantime the name, "Kaiping Railway Co.," had been changed to "China Railway Co." China was smarting under defeat in Indo-China at the hands of the French, and those in authority were led to perceive that lack of communications was the explanation of why the immense resources of the Empire were not able to overcome the relatively small forces by which the French had effected their conquest. Hence, in 1891, the Imperial Government ordered the line extended to Shanhaikwan, avowedly for purposes of military expediency.

Although the China Railway Co. enjoyed support from personages of official importance, it was not until 1894 that the Government itself concluded to take over railway enterprises for its own. The Tientsin-Shanhaikwan line was then pushed in both directions, reaching Fengtai that year, and surveys were carried on in the direction of Vladivostok. Construction had reached some 40 miles north of the Great Wall when war broke out with Japan.

The ease with which Japan defeated China probably surprised foreign countries more than it dismayed the Chinese. The idea was voiced that China was utterly without cohesion and about to fall apart. Under such conditions nations with possessions along the

Chinese borders expected to be able to incorporate portions of the Chinese Empire, and those without such possessions began to scheme actively for means of removing that disability. In swift succession came treaties or agreements between China and Russian, French, German, and British interests, all closely backed by their home Governments. The Chinese Eastern, to be built across northern Manchuria by a private institution created by the Russian Government for the purpose, was the first agreed upon. The Yunnan Railway, to be built from Yunnan to a connection with the French railways in Indo-China, was the next. The German Government obtained railroad construction rights in Shantung and the control of the harbor of Kiaochow. Russia thereupon obtained the right to build a railway northward from the harbor of Port Arthur on the Gulf of Chihli to a junction with the Chinese Eastern at Harbin. Great Britain secured control of Weihaiwei and secured the general promise that the construction of railways in the Yangtze Valley should be confided to companies of British nationality. The various foreign nations, in thus securing railway concessions, were justified by their statesmen, who spoke broadly of the advantages which would accrue upon the occurrence of the expected break-up of China. The Chinese, however, were taking active measures to meet this danger. A shrewd bargain was being made for the construction of a trunk line from Lukowkiao, near Peking, to Hankow. American interests made the first reconnoissance, believing that a contract for construction would follow. British interests appeared in competition, but while the Chinese negotiators were flitting back and forth between the British and the American representatives, Belgian agents appeared, who were willing to negotiate an agreement upon the terms for which China was holding out. When the Belgians discovered that they could not float the loan upon the agreed terms, they began immediately to negotiate for safeguards similar to those demanded by the British and the Americans; and with the support of the French and the Russian Legation they were able to obtain these terms.

This combination led to important results which will appear later, the most immediate of which, however, was the granting to an American syndicate the construction of the line from Hankow to Canton. Similarly, China negotiated with British capitalists a loan for the extension of the Imperial Railways of North China from a point north of the Great Wall, where construction had ceased, to Hsinmintun. The Russian Government, however, raised a strong protest, and after months of negotiation reached an understanding (to which China was not a party) with Great Britain, permitting the agreement to be carried out and providing, further, that Great Britain would raise no objections to any Russian projects north of the Great Wall, while Russia would raise no objections to British projects in the Yangtze Valley. Thus the Russian and the British "spheres of influence" were definitely outlined, and the policies of spheres of influence became duly recognized.

In the case of the Chinese Eastern, the Yunnan, and the Shantung Railways, the entire ownership and risk of the enterprise was conveyed without reservation to the foreign concessionaire, who, in all cases, though appearing in the agreement as a private concern, was

known to be the direct agent of its home government. In the case of the Peking-Hankow and the Peking-Mukden, however, ownership was vested in the Chinese Government, which not only accepted responsibility for the repayment of the loan and interest thereupon, but pledged the general revenues of the Government for the purpose. The agreements for these loans provided as additional security a very comprehensive degree of administrative control of the lines by nominees of the loaning syndicate.

DEVELOPMENTS SINCE 1900

Following the suppression of the Boxer uprising, the support which foreign military forces gave to the Manchu throne by recalling the Empress Dowager from her flight, resulted in a large number of contracts with foreign financiers for the construction of railways for the Chinese Government. In 1903 and 1904 agreements were made for the Shanghai-Nanking, Cheng-Tai, and Kaifeng-Honan lines, modeled after the Peking-Hankow agreement, which placed practically the entire administrative control of these lines in the hands of the foreign nominees.

In the meantime what is known as the "local movement" had been developing. For 20 years Chinese youth had been going abroad for modern education, and bringing back with them ideas of corporate organization and the ambition to put their learning to the test. As early as 1898 a number of short lines, such as the line from Shanghai to Woosung and from the Pinsiang collieries to the Hsiang River, were begun by the Chinese themselves, and the 1903 group of contracts gave a new impetus to the native desire for building its own railways. The Americans, who appeared to have sold out the Canton-Hankow agreement to the Belgians, were forced to surrender their agreement (for a consideration) and the project was parceled out to provincial companies. After 1904 the Imperial Government found itself practically unable to make further extension of the railway system by means of foreign loans. It contracted for extension of the British-built railway within the concession of Kowloon in 1907; but this line covered only the 90 miles to Canton and was the last contract to be negotiated by the Empire under the old terms.

With 1905 may be said to begin the success of China in regaining control of the railways within its borders. A concession which had been given a mining concern in Hongkong was taken back by the Government and the line, which is now known as the Taokow-Chinghwa, was made a Government railway. Native companies were formed to build railways between Tientsin and the Yangtze River; Shanghai to Hangchow and Ningpo; Kiukiang to Nanchang; Hankow to Szechwan; and several other scattered projects in various Provinces of the central plain. In 1906 the central Government began the construction of the Peking-Kalgan line. In 1908 China regained control of the Peking-Hankow line, which had proved unexpectedly profitable.

It soon became apparent that the native forces were not equal to the task they had taken in hand. Charges of corruption were made by stockholders against the officers. Countercharges of failure to meet stock assessments were made by officers against the stockholders. Mismanagement, favoritism, and intrigue for personal ends were

common accusations. The central Government found itself in an embarrassing position. On the ground that native capital was available, it had denied to foreign contractors the right to build lines—a principle agreed upon as far back as 1898. Native capital proving itself thus incompetent rendered the central Government helpless, diplomatically, when foreign interests reappeared to enforce their claims. Thus, early in 1908 British and German interests obtained a contract for the construction of the Tientsin-Pukow line, and the same British concern which had made the Peking-Mukden loan in 1898 and the Shanghai-Nanking loan in 1903 obtained a contract for the construction of the Shanghai-Hangchow-Ningpo line. An attempt was also made at this time to work out an agreement to cover the building of the Canton-Hankow line as well as a line from Hankow into Szechwan. Under the terms of these agreements, known thereafter as "Pukow terms," while the Chinese Government bound itself to employ maintenance engineers nominated by the foreign syndicate, these officers are specifically under the direction of a Chinese managing director, and all funds of the line are in absolute control of Chinese officials.

In making the Tientsin-Pukow and the Shanghai-Hangchow-Ningpo contracts, the central Government had taken over the investment of the local gentry and provincial officials at cost, by paying cash or by guaranteeing dividends upon their shares. When it came to the Canton-Hankow and Hankow-Szechwan line, however, the charges of maladministration were so great that the central Government refused to follow this precedent, and announced, instead, that an investigation would be instituted and that punishment of guilty officials would follow. Naturally, local opposition to the conclusion of a contract with foreign interests for these lines was very great. By 1911, however, a contract was made with the "four nation group," consisting of bankers representing England, Germany, France, and America. It aroused a storm of protest and was represented in the Provinces as a partition of South China among the four powers named. Naturally this opposition was greatest where the imperial power was weakest—namely, in the inaccessible Province of Szechwan. Representatives of the Government were driven out and a special envoy to the Province was murdered en route. Storm clouds of revolution had been gathering in the important centers for several years, and by accident one of these broke at Wuchang late in 1911. Revolutionary activities then began in all of the important provincial centers, in the face of which, after making practically no opposition, the Manchus abdicated on February 12, 1912.

With the passing of the Manchus local opposition to building of railways with foreign capital absolutely ceased. Within a year the provisional President of the new Republic was advocating the construction of 50,000 miles of trunk lines within the ensuing 10 years by means of foreign loans. That same year an agreement was made for the extension of the Kaifeng-Honan line eastward to the coast and westward to the interior of Kiangsu. This line is now known as the Lung-Hai. The following year an agreement was made with similar interests, Franco-Belgian, to build a north and south trunk line from Tatungfu in Shansi to Chengtu in Szechwan. Almost simultaneously an agreement was made with a British company for

the building of a line from Pukow west to the Peking-Hankow line, with possible extensions beyond. In 1914 contracts were made with British and French interests for the gridironing of the territory south of the Yangtze. Altogether between 6,000 and 7,000 miles of line were contracted for within these two years, and, most remarkable of all, the terms agreed upon granted to the foreign contractors an administrative control over the lines to a degree almost equal to those known as "Pukow terms."

CHANGES BROUGHT BY THE WAR

The outbreak of the World War in 1914 most effectively frustrated nearly all plans for railway construction. In 1915 an American company attempted to secure a railway construction contract, and in 1917 and 1918 the Japanese succeeded in obtaining several contracts. Later, with acknowledgment from their home Governments, the important financial institutions of France, England, Japan, and America made an agreement for joint financing of future railway construction and other large industrial enterprises in China, which combination was known as the "new consortium." It was expected that this combination would to some extent nullify the "spheres of influence," that were beginning to overlap, and would allay China's suspicions that certain countries had perhaps more than an altruistic interest in her development.

The effects of the new consortium, however, proved exactly the opposite of those anticipated. The Chinese, instead of being assured of immunity from foreign aggression, conceived the idea that its effect would be to subject them absolutely to foreign dominations. Their opposition to the consortium was pronounced. As the result of this and of the conditions brought about by the World War, railway construction during the 12 years of the Republic has totaled only 1,000 miles, compared with the 6,000 miles constructed in the final 12 years of the Empire—industrial lines being disregarded.

PROGRESS DURING PERIOD OF THE REPUBLIC

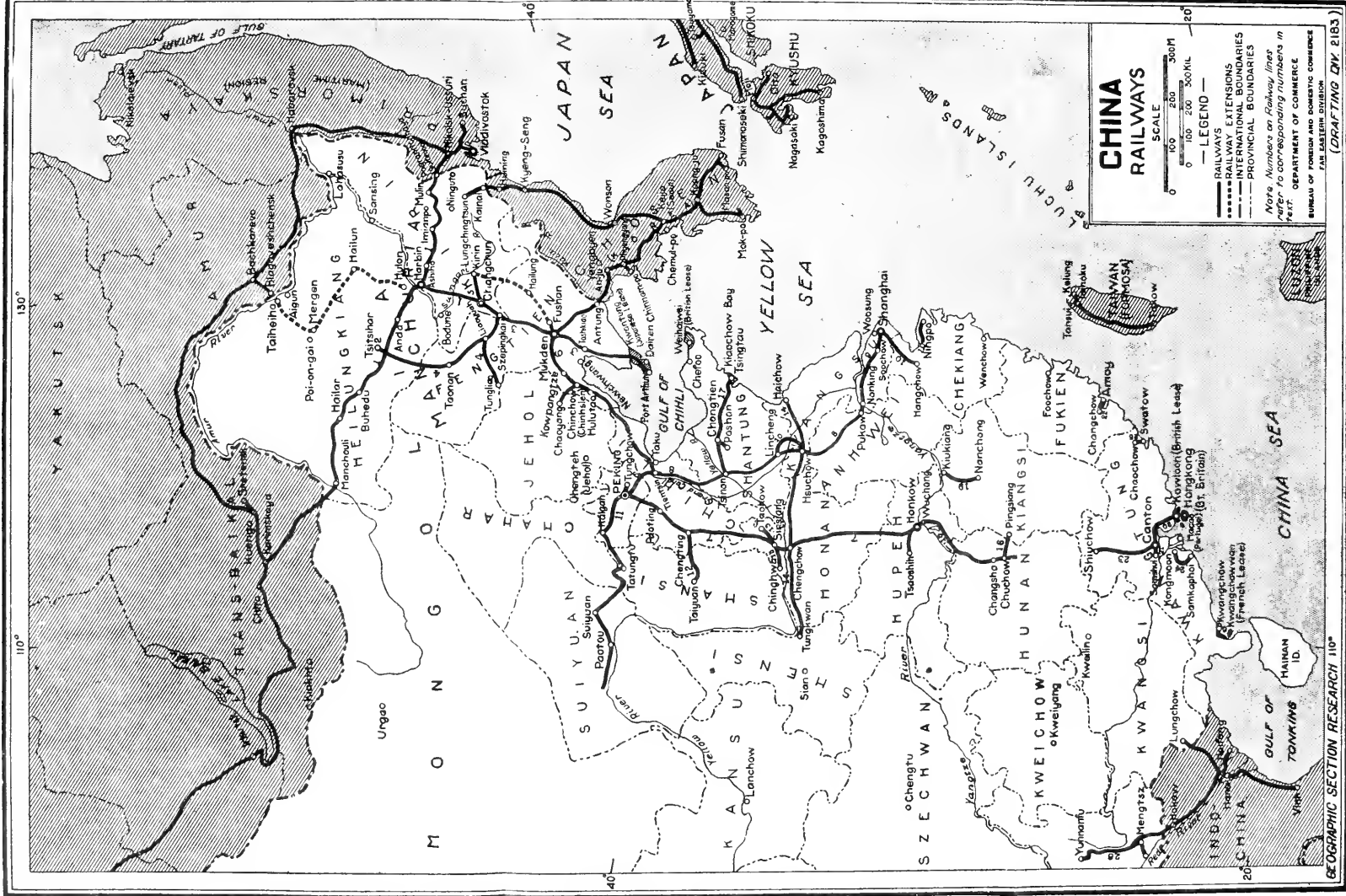
It would be incorrect to assume, however, that no progress has been made during the period of the Republic. One of the first acts of the new régime was to attempt to cement the various lines into a national system. The negotiators of the original contracts made no provision for this feature. Each line had been constructed as a separate entity, with its own designs for material and structures, and with no provision for cooperation between them. Trains arrived and departed at junction points with no consideration of connections. Tickets had to be purchased and baggage rechecked as one passed from one line to another. If passing beyond the originating line cargo had to be transferred from the cars of one line to those of another, and even the language spoken was different. During the 12 years of the Republic the general accounts of all of the railways subject to the jurisdiction of the central Government have been reduced to a common standard. Through trains run between principal centers. Tickets can be bought and baggage can be checked from any point to any other point upon any of the contiguous lines. Uniform rules for the packing and shipping of goods

have been provided. The metric system of distance and weight has been put into effect upon all lines. Even through billing of goods and the interchange of rolling stock have been introduced; and, while not 100 per cent effective, such practices are being rapidly extended. The accounting for through passenger traffic and through shipments is now performed in a central office. Arrangements have been made also for through traffic between Chinese Government lines with the South Manchuria, Chinese Eastern, Chosen, and Imperial Railways of Japan. The standardization of physical equipment has been agreed upon in principle, but the actual working out of the details will require considerable time.

An agreement was entered into by Japan and China in 1922 for the retrocession of the Shantung Railway. The line was purchased by the delivery of treasury notes, executed by the Chinese Government; and, by a resolution passed at the Washington conference, the powers recorded their hope that "to the utmost degree consistent with existing legitimate rights, the future development of railways in China shall be so conducted as to enable the Chinese Government to effect unification of railways into a railway system under Chinese control, with such foreign financial and technical assistance as may prove necessary in the interests of that system." However, the realization of this aspiration undoubtedly has been deferred by recent political events in China.

STATISTICS OF PRINCIPAL LINES

The following table gives the names of the principal lines, the character of the ownership, origin of construction funds, length of line, cost of construction, extent of funded debt, and amount of shares or Government investment.



100020°--26. (Face p. 317)

FIG. 12.

Railways ¹	Nationality of construction funds	Miles of line	Cost of road and equipment	Funded debt	Shares or Government investment	Remarks
CONCESSIONED LINES						
1. Chinese Eastern.....	Russian.....	1,078	R. 359,105,145	R. 200,109,468	R. 169,967,541	Ceded to Japan by Russia in 1905 Operated as an integral part of French Indo-China Ry. Property of Hongkong government.
3. South Manchuria.....	do.....	681	(²)	Y. 220,000,000	Y. 321,156,000	
26. Yunnan.....	French.....	288	Fr. 165,478,956	Fr. 10,500,000	Fr. 17,500,000	
20. Kowloon-Canton (British section).....	British.....	29	\$16,267,127			
GOVERNMENT LINES						
7. Peking-Hankow.....	Belgian.....	822	120,231,860	\$54,415,747	\$81,044,333	Original Belgian capital refunded by means of an Anglo-French loan, 1908. British capital used for "outside wall" extension only. German bonds acquired by China in settlement following the World War. Short sections began with Chinese capital. Short-term notes and bills for materials against extensions of this line are held by foreign interests.
6. Peking-Mukden.....	Chinese and British.....	617	87,398,514	15,254,762	73,047,538	
8. Tientsin-Pukow.....	Chinese and German.....	691	112,991,966	88,247,452	19,811,489	
9. Shanghai-Nanking.....	British.....	204	33,088,742	28,533,750	5,594,435	
10. Shanghai-Hangchow-Ningpo.....	do.....	180	23,005,942	14,573,209	12,963,603	The Peking syndicate which financed the construction of this line admits important French participation. Dutch interests are constructing the section east of the Tientsin-Pukow line. The South Manchurian Ry. now operates this line. Bought out by China in 1904. Operated as the "British section." Operated by South Manchuria Ry. Seized by Japan in 1915 and purchased by China in 1922.
11. Peking-Suiyuan.....	Chinese.....	461	41,878,740	4,810,850	1,789,982	
12. Cheng Tai.....	French and Belgian.....	152	24,091,606	10,327,083	13,372,993	
13. Tientsin-Chinghsia.....	British.....	95	8,330,773	6,364,677	2,951,123	
14. Kaifeng-Honan.....	Belgian.....	116	14,352,070	12,747,336	1,724,416	Debt held by Japanese interests. Property of the Province of Kwangtung.
14. Lung-Hai.....	Belgian and Dutch.....	330	(²)			
5. Kirin-Changchun.....	Chinese.....	77	7,894,415	5,889,016	1,764,175	
16. Chuchow-Pingsiang.....	do.....	56	4,846,499		4,218,308	
20. Canton-Kowloon.....	British.....	90	15,913,798	14,107,500	1,658,575	Debt held by Japanese interests. Property of the Province of Kwangtung.
21. Canton-Samsui.....	American.....	30	3,306,240		1,789,982	
22. Changchow-Amoy.....	Chinese.....	18	3,300,414	375,415	1,187,825	
15. Hupoh-Hunan.....	Four Nation group.....	264	59,339,917	54,295,702	1,277,129	
4. Sui-Tao.....	Japanese.....	268	11,649,967	20,778,769	426,188	Debt held by Japanese interests. Property of the Province of Kwangtung.
17. Kiao-Tsi.....	German.....	253	Y. 40,000,000	Y. 40,000,000		
19. Kinkiang-Nanchang.....	Chinese.....	79	\$12,754,589	\$8,257,723	4,496,865	
24. Shuning-Canton.....	do.....	93	3,567,325			
23. Kwangtung Provincial.....	do.....	141				
OTHER LINES						
19. Kinkiang-Nanchang.....	Chinese.....	79	\$12,754,589	\$8,257,723	4,496,865	Debt held by Japanese interests. Property of the Province of Kwangtung.
24. Shuning-Canton.....	do.....	93	3,567,325			
23. Kwangtung Provincial.....	do.....	141				

¹ Numbers refer to map as guide to location.² Spoil of war.³ Not complete.

The table below gives the operating revenues and expenses, operating ratio, and net revenue during the year 1922 for the principal lines, so far as data are available.

Railways	Revenues	Expenses	Operating ratio	Net revenue
Chinese Eastern.....	R. 33,333,770	R. 27,577,675	82½	R. 5,756,095
South Manchuria.....	Y. 87,662,013	Y. 34,099,801	39	Y. 53,562,212
Yunnan.....	Fr. 28,241,625	Fr. 21,210,785	75	Fr. 7,030,845
Kowloon-Canton (British section).....	\$710,295	\$562,144	79	\$148,151
Peking-Hankow.....	26,388,117	11,444,303	43	14,943,814
Peking-Mukden.....	20,090,449	12,933,499	63	7,756,950
Tientsin-Pukow.....	16,121,893	9,678,609	60	6,443,284
Shanghai-Nanking.....	7,572,329	4,525,891	60	3,046,438
Shanghai-Hangchow-Ningpo.....	3,603,009	3,183,613	88	479,396
Peking-Suiyuan.....	6,593,825	4,536,041	69	2,057,784
Cheng Tai.....	3,590,118	1,597,419	44	1,992,698
Taokow-Chinghwa.....	1,389,336	626,087	45	763,250
Kaifeng-Honan.....	2,418,907	1,045,709	43	1,373,198
Lung-Hai.....	3,162,842	1,383,401	43	1,779,440
Kirin-Changchun.....	2,789,552	1,790,525	64	999,027
Chuchow-Pingsiang.....	525,055	543,832	136	(¹)
Canton-Kowloon.....	1,541,494	1,028,745	67	512,748
Canton-Samshui.....	1,962,091	1,487,435	51	1,474,656
Changchow-Amoy.....	76,826	85,774	112	1,948
Hupei-Hunan.....	1,895,980	1,632,808	86	263,177
Ssu-Tao.....	1,061,353	1,107,062	70	Y. 4,494,291
Kiao-Tsi.....	Y. 8,455,683	Y. 4,416,812	52	Y. 4,044,065
Kiukiang-Nanchang.....	1,839,734	1,806,818	112	(¹) (¹)
Sunning.....	1,764,136	1,048,623	90	1,115,373
Kwangtung Provincial.....	2,490,000	(²)	(²)	(²)

¹ Deficit.² Data for 1916.³ Less \$8,948.⁴ Data for 1921.⁵ Not reported.

MANAGEMENT OF CHINESE RAILWAYS

On the lines constructed under special concessions the form of management follows generally the practices in the homeland of the concessionaire, with special features provided to meet special conditions.

CHINESE EASTERN RAILWAY

The agreement of September, 1896, between China and Russia for the construction of the Chinese Eastern Railway provided that the president should always be a Chinese and should reside in Peking. When the first president died, however, in 1903, the vice president, a Russian and an officer of the Ministry of Finance at St. Petersburg, became president and continued to hold that office during the life of the Russian Imperial régime. Theoretically the Chinese Eastern Railway was governed throughout that period by a board of directors under the Ministry of Finance at St. Petersburg. Always under the direction of the Ministry of Finance, the board exercised a certain degree of supervision through the device of a revision committee, whose representatives were attached to each department of the railway and had the right of criticism and, to a certain degree, of censorship. Actually, however, direction of the railway was in the hands of the general manager, who resided at Harbin. This powerful personage was not only at the head of all Russian civil administration within the railway zone, with full direction of the railway (accounting department, transportation, maintenance of way and equipment, police control, and the making of rates and municipal legislation), but in the later years of the Czarist régime he was also

commander in chief of Russia's military forces in the railway zone. The Chinese Eastern Railway was thus in itself a kind of political state as well as an industrial institution, with its general manager possessed virtually of the powers of a dictator, subject only to the will of his imperial master.

After the collapse of Imperial Russia the management of the railway underwent a change. The residence of the board of directors was changed to Harbin and 5 of the 10 members were Chinese, the president being a Chinese. Police control was taken over by Chinese military authorities. In each department a Chinese was appointed assistant chief, but his powers were limited largely to observation rather than direction.

It is too early to forecast the possible changes that must result from the settlement with the Russian Soviet Government, although undoubtedly important changes are bound to take place. The present agreement provides merely a substitution of Soviet representatives for former representatives of the Russo-Asiatic Bank, but it is not improbable that the Russian representatives will endeavor eventually to recover civil administration within the railway zone. At present all civil institutions in the railway zone which were formerly under the railway control are subject to Chinese civil administration.

SOUTH MANCHURIA RAILWAY

The South Manchuria Railway Co., like the Chinese Eastern, transcends the ordinary functions of a railway. It has charge of police control along the railway, directs general civic and educational matters, engages in extensive mining operations, and generally directs matters of commerce and industry within its area. A board of directors determines the policies for and harmonizes the interests of the several institutions connected with the railway. The railway itself is under the direction of a general manager, who, subject to the board of directors, has charge of all its activities. All important changes of policy, however, with respect to its different departments must be confirmed by the board of directors before the general manager's decision can become final. The board of directors is finally subject to the jurisdiction of the Minister of Railways of the Japanese Imperial Cabinet.

CHINESE GOVERNMENT LINES

On Chinese Government railways the organization is generally uniform, but the distribution of powers within the organization varies. The typical organization is that of a managing director, to whom the traffic manager, locomotive superintendent, maintenance-of-way engineer, chief accountant, and chief of police make their reports. The traffic manager has jurisdiction not only over rates, fares, and conditions of shipment, but over transportation also. Stores are usually under the jurisdiction of the particular department using them. The Peking-Hankow, Peking-Suiyuan, and Shantung Railways have separate stores departments.

The typical organization is considerably modified by two factors; (1) Loan agreements, and (2) the consolidation policy pursued during the period of the Republic.

On lines built with foreign loans a certain number of foreign officials are provided for and their powers are enumerated in the agreement. On most lines a foreign general manager, with the title "engineer in chief," is named, to whom the heads of departments report rather than to the managing director. In such instances the managing director has ordinarily little active control over the technical operations of the lines, but is the medium of communication between the railway and the Government. In addition to the foreign engineer in chief, or general manager, the loan agreement usually specifies a foreign chief accountant, whose powers cover not only the organization of the system of accounts and matters affecting personnel, but who has custody of the entire railway funds. Only upon his signature can these funds be drawn from the depository specified in the agreement.

In the agreements prior to 1908 not only are foreigners named as heads of the important departments, but they are specified also for other technical positions of responsibility. Thus on the Peking-Mukden, Shanghai-Nanking, Cheng Tai, Kaifeng-Honan, and Taokow-Chinghwa not only are the engineers in chief, chief accountants, locomotive superintendents, maintenance engineers, and traffic managers foreigners, but also most of the district engineers, traffic inspectors, and locomotive inspectors are foreign. For the most part these foreign officials have complete control of their departments, including the making of rates and of rules for the packing and shipping of goods and the right to discharge subordinates. On the Peking-Mukden, however, a considerable limitation upon the latter power has been imposed by a provision in the contract which places the hiring of native employees entirely in the hands of the managing director. The result is that practically the full control of personnel under any department is in the hands of the chief engineer's Chinese assistant, rather than under control of the head of the department.

On lines built as the result of contracts made in 1908 and thereafter, foreign participation in the organization has been very considerably modified. For example, on the Shanghai-Hangchow-Ningpo (management of which was later consolidated with that of the Shanghai-Nanking), although the same foreign officers and Chinese officers participate in the management of the two lines, their positions are reversed. The foreign departmental chief on the Shanghai-Nanking has a Chinese assistant, who on the Shanghai-Hangchow-Ningpo is in effect the chief to whom the foreigner is an assistant. The heads of departments on the Shanghai-Nanking road report to the chief engineer for instructions; on the Shanghai-Hangchow-Ningpo, they take orders from the managing directors. However, the custody of the funds belonging to the railway is by contract in the control of the foreign chief accountant.

On the Tientsin-Pukow line there is no foreign engineer in chief, but all heads of departments report to the managing director. The traffic manager is a Chinese. The two maintenance departments are divided into districts. In the southern district both the locomotive superintendent and the chief maintenance engineer are British, but in the northern district they are Chinese. The chief accountant is a

Chinese, and has full control of the funds. These same conditions apply to the Hupeh-Hunan section of the Canton-Hankow Railway, except that it has only the one district.

Organization on the Peking-Hankow was originally similar to that of the other lines contracted for prior to 1908; but in 1909, when the original loan was refunded, the new loan made no reference to personnel of administration, and hence all the foreign departmental chiefs were reduced to the position of assistants to their former Chinese assistants, who then became chiefs. Their functions did not change radically; but gradually the influence exercised by the foreigners has been reduced, until they are now virtually in the position of mere advisers on technical matters.

RELATIVE IMPORTANCE OF LINES

The relative importance of the various lines is shown by the following tabulation, which divides the various lines into groups according to the amount of revenue (figures are for 1922 unless otherwise indicated):

CLASS I. REVENUES MORE THAN \$10,000,000

Railways	Miles	Revenue	Service units		Total units
			Ton-kilometers	Passenger-kilometers	
			<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
South Manchuria.....	681	Y. 87,662,013	4,047,832	732,130	4,779,962
Chinese Eastern.....	1,078	R. 33,333,770	866,768	437,551	1,304,319
Peking-Hankow.....	822	\$26,388,117	1,120,510	490,260	1,610,770
Peking-Mukden (inside wall only).....	293	20,690,448	825,568	826,008	1,651,576
Tientsin-Pukow.....	691	16,121,892	830,819	479,601	1,310,420

CLASS II. REVENUES \$5,000,000 TO \$10,000,000

Shantung Railway.....	283	Y. 8,455,683	441,459	217,899	659,358
Shanghai-Nanking.....	204	\$7,572,528	318,377	648,709	967,086
Peking-Suiyuan.....	461	6,593,824	230,658	88,460	319,118
Lung-Hai (including Kaifeng-Honan).....	446	5,581,748	111,454	215,872	327,326

CLASS III. REVENUES \$1,000,000 TO \$5,000,000

Shanghai-Hangchow-Ningpo.....	180	\$3,663,009	103,200	262,273	365,473
Cheng Tai.....	95	3,590,117	111,689	36,368	148,057
Kirin-Changchun.....	77	2,789,552	68,014	35,754	103,768
Yunnan.....	288	2,658,661	(1)	75,570	75,570
Kwangtung.....	141	2,490,000	(1)	(1)	-----
Hupeh-Hunan.....	264	8,855,980	764,000	62,259	63,023
Ssu-Tao.....	266	1,661,352	48,744	19,764	68,508
Canton-Kowloon.....	90	1,541,493	10,411	136,856	147,267
Taokow-Chingbwa.....	95	1,389,336	81,197	14,781	95,978
Sunning.....	93	² 1,164,136	(1)	(1)	-----

CLASS IV. REVENUES LESS THAN \$1,000,000

Kowloon Canton.....	29	\$710,295	(1)	(1)	-----
Kiukiang Nanchang.....	79	² 539,734	(1)	(1)	-----
Swatow Chaochowfu.....	26	220,537	(1)	(1)	-----

¹ Not reported.

² For year 1921.

PROPERTY AND EQUIPMENT¹

The standard gauge for railways in China is 4 feet 8½ inches. Exceptions to this are the Chinese Eastern, with 5-foot gauge; the Cheng Tai and Yunnan Railways, with meter gauge; and numerous scattered industrial lines with various gauges.

BRIDGES

On each line the practice followed in bridge construction has been that of the nation to which the loan syndicate belonged.

The longest bridge in China is that on the Peking-Hankow line over the Yellow River, which is 9,875 feet long. The Tientsin-Pukow bridge over the same river, although it is about 200 miles downstream, is only 4,080 feet long. The Chinese Eastern bridge over the Sungari River at Harbin is also an imposing structure, and the Liao River bridge on the Peking-Mukden consists of twenty 100-foot spans.

BALLAST

Except on the Chinese Eastern and lately built extensions of other lines, Chinese railways are ballasted with broken rock. A portion of the Tientsin-Pukow utilizes broken brick in part. The Chinese Eastern depends principally on gravel and sand. On its Harbin-Changchun section a clay ballast is covered with broken rock to give the appearance of rock ballast and to keep down excessive dust.

PURCHASING OF MATERIALS

Purchasing of materials for the railways in China differs with the various lines, thus indicating the individuality which has characterized each line from its inception. On the Chinese Eastern Railway purchases have been conducted hitherto by the superintendent of the materials department, acting under the suggestion and advice of the heads of the various operating departments regarding the introduction of special appliances or new materials. With respect to all the more important purchases the general manager was consulted. The new régime inaugurated by the special agreement made between the Manchurian Provinces and the Soviet Government will probably not alter this situation to any considerable extent.

On the South Manchuria Railway the usual materials are purchased by the stores department at Dairen. The Tokyo office has been employed at times in placing orders. The using departments instruct the stores department as to specifications and the use of new or improved devices. The South Manchuria Railway, operating as it does the two Chinese Government railways—the Kirin-Changchun and the Ssu Tao—does their purchasing.

On the Chinese Government railways the various loan contracts limit, to a considerable extent, freedom of purchase. On several of these, although specific reservation is made in favor of articles produced in China, preference is stated for articles manufactured

¹ *Far Eastern Markets for Railway Materials, Equipment, and Supplies*, by Trade Commissioner Frank Rhea, published by the Bureau of Foreign and Domestic Commerce as Special Agents Series No. 180, gives a detailed discussion of the various types of equipment used in China. This publication can be obtained from the Superintendent of Documents, Government Printing Office, Washington. Price, 35 cents.

by the nationality of the loaning syndicate. This reservation, however, has no greater practical effect upon preferences in purchasing than the provision that the principal using officers shall be of the nationality of the loaning syndicate. It is inevitable that officers will specify materials of the type and quality with which they are familiar, and it is likewise inevitable that they will be more familiar with the types and specifications of materials manufactured in their home countries. Specific provision is made in favor of British manufacturers (after Chinese manufacturers) on the Shanghai-Hangchow-Ningpo and Canton-Kowloon lines and on the British section of the Tientsin-Pukow line. The presence of Belgian officers on the Lung-Hai, Kaifeng-Honan, and Cheng Tai lines gives them all the practical advantages of contractual preference on these lines, as does the presence of British officers on the Shanghai-Nanking, the Hupeh-Hunan section of the Canton-Hankow, the Taokow-Ching-hwa, and the Peking-Mukden. For a long time the presence of Belgian officers on the Peking-Hankow operated in this manner. However, on that line, as well as the Peking-Suiyuan and the Shan-tung Railway, purchasing is now entirely in the hands of the Chinese administration, which conducts it largely by means of tenders, although there is a considerable tendency, induced by straitened finances, toward small local purchases. On these lines the arrangements for tenders are made by the chief of the materials department, but must be sanctioned by the managing director. Large purchases and the introduction of new and improved devices must be negotiated to a considerable extent through the managing director's office.

Regarding the purchasing of material, the Ministry of Communications has recently laid down certain regulations which apply to all railways, except in the face of contrary provisions in the loan agreements. Under these standard regulations whenever any single purchase of material or of similar materials will involve a payment estimated to be over \$5,000 Chinese currency an invitation to tender must be made, unless the material is produced solely by one manufacturer and is handled by an exclusive agency or unless a supplier has made a long-term agreement with respect to a certain quantity of material. Firms submitting tenders are required to make a deposit as a guaranty of good faith, and in addition are required to pay for the cost of specifications and drawings furnished by the railway to the firm in preparation of the submission of its tender. The amount of this deposit is fixed by the railway according to circumstances. These deposits are returned to the bidders after the award of tender, except that the deposit of the successful tenderer is transferred to a deposit against the contract entered into. The invitation of tender can be made by the railway only after approval by the Ministry of Communications. In case the estimated cost of the materials exceeds \$50,000, representatives of the Ministry of Communications are present at the time of opening the tenders. Railways are not bound to accept the lowest bid, except that it is prescribed that when several bidders are equally known and providing that their terms of delivery and payment are similar, the one whose bid is lowest shall be selected.

OPERATING METHODS AND ORGANIZATION

There is little to distinguish the organization of the departments of maintenance of way and maintenance of equipment in China from those in America, except that the number of employees is considerably greater. The personnel of train crews is under the control of the traffic department, while engine crews are under the jurisdiction of the locomotive department. The engine crew and the train crew are entirely independent of each other and there is little cooperation between them.

The responsibility for getting trains over the line devolves principally upon station masters. The "token" system of train movement is that in use on all lines. On the less important lines that delivery of the token or "staff," as it is called in China, is controlled by the station master by means of the telegraph, but on all of the important lines automatic, electrically controlled instruments are installed. On the Chinese Eastern a train-control system was installed through the influence of John F. Stevens. This system in effect combines the American dispatcher system with the token system as a means of facilitating train movement. On the Shanghai-Nanking Railway the same system is now under trial, with the distinction, however, that the Shanghai-Nanking so far has omitted the record of train movements on the train sheet. As traffic becomes more dense upon other lines and as managements become more exacting with respect to regularity of train movement, an extension of the train-control system may be expected.

TRANSPORTATION METHODS

Passenger equipment is divided into at least three classes—first, second, and third—and on the lines radiating from Shanghai (the Tientsin-Pukow and the Peking-Mukden) there is, in addition, a fourth class. Practically every train contains cars of the first three classes. Nearly all of the first-class cars are of the coupé type. The privacy which the compartment affords is particularly appreciated by Chinese women, who are emerging only now from a seclusion maintained for centuries. The great diversity of nationalities represented by first-class travel, with the consequent differences in language and etiquette, also makes a strong argument for the coupé type. However, on the run between Peking and Tientsin the Peking-Mukden line has made the experiment of a so-called parlor car, arranged not unlike American day coaches. The seats in most of the coupé cars are convertible into berths for night use.

On the longer runs second-class cars are arranged similarly to those of the first class except that four berths to a coupé prevail instead of two. On the shorter runs, however, the second-class car is merely a rough counterpart of the American day coach, seats usually being upholstered in rattan or composed of narrow wooden slats. Third-class cars are even cruder, and fourth-class travel is mostly in freight cars on mixed trains.

Freight traffic moves principally in carload lots and in through trains between large centers. Less-than-carload freight, and the occasional carload to be picked up at small stations, is hauled in mixed trains upon which passenger traffic predominates. Most of

the freight equipment comes under three headings—box cars, coal cars, and flat cars. There are a few tank cars, but most of these are owned by the oil companies operating in China. On the Shantung Railway there are special cars for the use of lime shipments. This type consists of a steel gondola, fitted with a roof which can be swung up one-half at a time. Livestock is shipped in high-sided coal cars, although a few lines have stock cars which serve a variety of other purposes. Since most of the grain comes to market after the close of the summer monsoon, open cars can be used with safety for this purpose; and since the rate system charges for the entire capacity of the car, whether the same is used or not, open cars are favored by shippers for all the lighter commodities as well as for grain, as not only can the car be conveniently loaded but a larger proportion of the capacity can be availed of. Thus, cotton and wool in bags or bales are heaped up to the limit of clearance. Fruits, such as apples and pears, are first picked in baskets and then piled on the open cars. There are no refrigerator cars in China. Against the occasional snow or out-of-season rain, bamboo mats are tied over the cargo in the open cars. Some of the lines are furnishing tarpaulins for especially valuable or easily damaged shipments. On the South Manchuria and Chinese Eastern lines heavy rope nets are placed over the tops of open cars to prevent pilferage.

PILFERAGE

Pilferage is a very serious matter on Chinese railways, and the Chinese Government railways accept shipments only at owner's risk, except at special rates, some 10 per cent higher than the normal rate. The result is that most of the shippers send a watchman with their cargo. Each Province levies one or more transit taxes; therefore it is necessary for some sort of agent to accompany cargo going long distances. As these taxes are more or less arbitrary and without system, it is profitable for those who are familiar with the situation to make special arrangements with the tax collector at each of these *likin* stations. Thus the railway risk rate is attractive to only the occasional small shipper over short distances. Yet the presence of a watchman is not full guaranty against pilferage. Closed cars are perhaps more often subject to such depredations than are open cars, unless the former are fitted with steel floors. The poverty of the people is so compelling in China that almost any risk and labor will be undertaken to bore through the floor of a closed car into a possible tin of oil or other liquid. The sharpened end of a hollow bamboo thrust into a sack of grain leaves no evidence of violence, but in the course of half an hour sufficient dry wheat will rattle through to feed a family for several days.

RATES

Passenger rates on the Chinese Government railways are fixed on a distance basis according to class. There are four classes under ordinary passengers; excursion traffic is grouped under three classes; and in addition to these are privileged passengers (mostly members of the families of employees) and Government passengers, both civil and military. About 90 per cent of the total passenger move-

ment falls under the head "ordinary," and nearly 90 per cent of this consists of third and fourth class travel. Third-class rates average about $1\frac{1}{2}$ cents per mile; fourth-class rates are somewhat less than half the third-class rate; second-class rates average nearly double the third-class; and first-class rates are more than three times the third-class rate. While this spread between the different classes is fairly constant throughout the Government lines, there is considerable variation in the general level of rates, depending principally upon the extent of competition from water transportation. Thus the rates on the lines radiating from Shanghai and from Canton are fully a third lower than those in the other parts of the coastal plain, while those in Manchuria are a third higher.

The system of freight rates charged on the different lines originally varied with each line, but within the past five years the Government railways have worked out a uniform classification and basis for rates. This uniform classification recognizes six classes, in addition to which there are special rates for dangerous articles and goods of extraordinary value. In classifying goods the following factors have been given consideration: Value of goods; bulkiness; amount of traffic from a given source; need of encouragement to a new industry; special services required; special considerations. For the most part mineral products, as coal, sand, and gravel, are to be found under the sixth class; most agricultural products come under the fourth and fifth classes; crude manufactures under the third class; finished and high-class manufactures under the second class; and highly valuable goods under first class.

The range in rates is from as low as three-fourths cent per ton-mile for coal to 7 cents per ton-mile for manufactures. However, this represents the range between the lowest rate on the line with the lowest level to the highest rates on the line with the highest level. Within each class three sets of rates are offered—picul rates, ton rates, and carload rates (per ton). The tapering principle is recognized. However, not only is there a different general level of rates on each line, but the rapidity with which the taper runs out differs on the various lines. A typical example, however, is afforded by the Peking-Hankow line, in which six zones are provided—1 to 20 kilometers; 21 to 50; 51 to 100; 101 to 200; 201 to 400; above 400. The lines lying on the coastal plain have, roughly, the same average length of haul and the same rate level. A distinctly higher rate level is observed, however, by the Cheng-Tai and the Peking-Suiyuan lines, which traverse mountainous country.

Compared with the Chinese Government railways, freight rates on the South Manchuria line and its branches average about 25 per cent higher. Those on the Chinese Eastern are nearly double, and those on the Yunnan Railway more than treble. In addition to the six classes of goods recognized on the Chinese Government railways, there has come to be a considerable number of commodity rates. These commodity rates, however, are generally based on distance rather than being a flat rate from a given source to a given destination. Most of these special commodity rates occur in connection with the movement of coal. Five years ago the number of commodities recognized in the classification of any line did not exceed 600. The uniform classification, however, at the present time contains about

1,500 names, this including a considerable duplication for purposes of easy reference.

On the South Manchuria line freight is carried under two categories, ordinary and special. Ordinary freight comes under four classes. Special freight includes dangerous articles and articles which are carried at special piece rates. Numerous commodity rates also exist. On the Chinese Eastern about 30 classes are recognized; there are also a number of special commodity rates. The passenger classification on these lines is similar to that on the Chinese Government railways.

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CHINESE POSTAL SERVICE

Until 1923 Great Britain, France, Japan, and America—and, earlier, Germany and Russia—maintained postal agencies in China, but the powers assembled at the Washington Conference, recognizing the efficiency of the Chinese postal service, agreed in December, 1921, to withdraw those agencies. As a result the work of approximately 100 foreign postal agencies was turned over to the Chinese offices at the beginning of 1923. Japan, however, has retained those of its offices situated in the South Manchuria Railway zone, though all other Japanese post offices in China were withdrawn at the appointed time.

The Chinese postal service is under the control of the Ministry of Communications at Peking. The Directorate General of Posts is headed by a Chinese Director General and a foreign Co-Director General, in whose hands rests executive authority. A staff of about a hundred foreigners and many thousands of Chinese is employed under a system similar to the civil-service system in administrative departments of the United States Government.

China is a member of the Universal Postal Union and participates in all the usual business conducted by postal services throughout the world. Ordinary and registered mails, parcels, insured letters, and money orders are exchanged with most of the rest of the world. As this chapter is intended mainly for Chinese and American business men, only the domestic service and the services between America and China will be dealt with here.

DOMESTIC SERVICE

The total number of places provided with postal facilities at the end of 1923 exceeded 40,000. Serving these places are mail routes totaling 260,000 miles, of which but 7,000 miles are railway. Water routes, consisting of steamer, launch, and native boat lines are used for 21,000 miles. This leaves 232,000 miles of overland courier lines on which mails are transmitted by every available means, from wheelbarrows to motor cars, including the coolie and the camel. One of these courier lines stretches from the railhead in Honan for 3,600 miles (more than the distance from New York to San Francisco) to Kashgar in western Chinese Turkestan. Mails are dispatched over this line and over all other lines leading to important cities every day in the year.

Printed matter and trade circulars.—Unaddressed trade circulars, in single sheets or small pamphlets, are distributed by the post office at 10 cents per 100 copies. Advertisements thus distributed reach that part of the public which oftenest receives mail, and such persons are the most likely "prospects" for the sale of foreign goods, as they are of the more prosperous classes. Trade circulars printed in a

foreign language are delivered to foreigners and to those Chinese who habitually receive foreign mails.

Money orders.—There are over 2,000 post offices which handle money orders. As the currency of China is not standardized, the fees charged are variable, but are based upon the relative value of the currency in use in the various Provinces, as indicated by actual market quotations. Money orders issued in 1923 exceeded \$95,000,000, an increase of 25 per cent over the previous year.

Parcels.—Domestic parcel postage includes registration fee. Postage between all steam-served offices east of Szechwan is 20 silver cents for the first kilo and 10 cents for each additional kilo. The limit of weight is 10 kilos (about 22 pounds).

Insurance.—Insurance of domestic parcels containing gold or silverware and of letters containing bank notes is compulsory.

SINO-AMERICAN POSTAL ARRANGEMENTS

Mails between the United States and Chinese post offices are exchanged directly between the exchange offices of the two countries, and each administration sorts mails by districts and cities for distribution by the other. Thus, for instance, Chinese mails for New York City are tied in bundles or inclosed in separate bags in China and need not be re-sorted by the Seattle or San Francisco office upon landing in America, but may go directly to New York by the first train available. The business man in China may also utilize the San Francisco to New York air-mail route upon payment of the fee for transmission by that service. Postage rates from China to America are those found in the union tariff of postage. The rates on insured letters do not, however, apply, as the United States has not adhered to the union convention for exchange of insured mails.

A special agreement exists for exchange of parcels between the two countries. All the usual sorts of merchandise and printed matter may be sent by parcel post. Letters, post cards, and written matter, or articles which violate the internal laws and regulations of either country may not, however, be inclosed in parcels. Poisons, firearms, obscene or immoral matter, and dead animals are prohibited.

The maximum weight of a parcel is 22 pounds except to or from Shanghai, where 50 pounds is the limit. The limit of size is 84 inches in length and girth combined.

Postage on parcels is 12 cents gold (24 cents Chinese) per pound or fraction thereof. Registration fee is 10 cents in addition to postage. In the case of parcels to or from places in China not served by steam (i. e., railway, steamer, or launch), domestic postage is charged in addition to the above rates. A tax of 50 cents per parcel is charged on each parcel destined for places in Manchuria north of Changchun and for places in Yunnan reached via Hongkong and Indo-China. In the case of parcels posted in America, this tax is collected from the addressee.

A customs declaration on a form furnished by the post office is necessary for each parcel. In addition to the customs declaration, senders of parcels from China to the United States are strongly advised to inclose in each parcel a list of contents showing value.

This list should be a copy of a consular invoice for parcels valued at over \$100 in United States currency.

Article XII of the Sino-American parcel-post agreement reads:

The Post Office Department of either of the contracting countries will not be responsible for the loss or damage of any parcel, and no indemnity can consequently be claimed by the sender or addressee in either country.

Loss or damage to parcels is, however, very rare except in instances of poor packing. Senders of parcels should be very careful to pack breakable articles in strong boxes, as considerable strain and great weight must be provided against in transmission by sea. In apparent cases of loss or delay of parcels, parties interested should communicate at once with the postal authorities, who will gladly investigate. A fee of 10 cents should be sent with the inquiry if it is desired that a parcel be traced to destination.

Parcels are not insured by the postal service if forwarded by direct service, but they may be insured in private companies for a small fee. Parcels from China to the United States, if transmitted through the British postal service, may be insured, but the postal rate is higher and the time en route much longer.

CUSTOMS TREATMENT OF PARCELS

Parcels entering China destined for the treaty ports are nominally subject to the ordinary customs duties of, but, owing to the miscellaneous nature of a parcel-post trade, a 5 per cent ad valorem duty is usually levied and is paid by the addressee or his agent upon delivery. Parcels destined to places beyond treaty ports are subject to transit duties of $2\frac{1}{2}$ per cent additional. For convenience, the post office collects both tariffs on behalf of the customs administration.

Parcels for export are subject to the same duties as incoming parcels.

The Chinese customs usually pass duty free all single parcels valued at less than \$10 Chinese currency (about \$5 United States).

MONEY-ORDER SERVICE

Money orders may be purchased at any United States post office for payment at any money-order office in China. The orders are made for United States currency and are converted at a Chinese exchange office. Foreign bank-exchange rates are used in making the conversion.

Money orders payable by post offices in the United States in United States currency may be purchased at post offices in China in Chinese currency, the exchange being at the rate of the day. The fee is 10 cents per \$10 or fraction thereof and the maximum amount in a single money order is \$100, United States currency. As all money orders must pass through the exchange offices of both countries, they require a little longer time to reach the payee than a letter would require.

TARIFFS AND INTERNAL TAXES ¹

By Commercial Attaché Julean Arnold

For 60 years prior to the treaties of 1842 and 1844, the merchants of western nations trading with China had no contact with Chinese customs duties. All taxes against foreign trade were paid by the Chinese ko hong merchants at Canton, who held the monopoly of trade rights with foreigners. The treaties of 1842 and 1844 with Great Britain, the United States, and France stipulated that: (1) Foreign trade with China was permitted at four ports other than Canton; (2) the monopoly of doing business with foreigners, held for decades by the Canton ko hong, was abolished; (3) foreign merchants could rent land at designated places, called treaty ports, for business and residence, and could transact business in the open market with their persons and property under the protection and jurisdiction of the laws of their respective countries instead of under Chinese law; and (4) foreign import and export trade should be subject to the levy of moderate customs (averaging 5 per cent *ad valorem*) according to a published tariff.

Following these treaties, certain irregularities began to crop up in the Chinese administration of the customs which the consuls of the United States, France, and Great Britain earnestly endeavored to correct. The difficulties were not all of Chinese creation. The attitude of certain foreign merchants, now beyond Chinese jurisdiction, who endeavored to take advantage of every opportunity to evade payment of the stipulated duties, had its part in complicating the situation.

The Taiping rebels captured Shanghai native city on September 7, 1853, and on the following day the customhouse in the foreign settlement was looted and burned. In order to protect their trade interests, the western powers, whose nationals occupied the area north of the Shanghai walled city, which by treaty had been set aside for foreign business and residence, declared their territory neutral and refused to allow either the Imperial Government forces or the rebels to use it as a base of operations. It became a refuge for numerous Chinese officials, and in June, 1854, the "taotai," who functioned as superintendent of customs and was a refugee in the foreign settlement, was prevailed upon by the British, American, and French consuls to appoint for the port of Shanghai a commission of three foreign (French, American, and British) inspectors of customs. A year later the "taotai" was impeached and banished by the central Government. The French and American inspectors retired from the commission, and this left authority entirely with the British representative, who developed the administration to include others of the treaty ports.

Rule 10 of the supplementary tariff schedule of the British treaty of Tientsin in 1858 prescribes one system for the collection of cus-

¹ Indebtedness to Consul J. E. Jacobs is acknowledged for very helpful data on China's internal taxes.

toms duties at all treaty ports in China. It contains the following stipulation:

The high officer appointed by the Chinese Government to superintend foreign trade will, accordingly, from time to time, either himself visit, or will send a deputy to visit, the different ports. The said high officer will be at liberty, of his own choice, and independently of the suggestion or nomination of any British authority, to select any British subject he may see fit to aid him in the administration of the customs revenue; in the prevention of smuggling; in the definition of port boundaries; in discharging the duties of harbor master; also in the distribution of lights, buoys, beacons, and the like, the maintenance of which shall be provided for out of the tonnage dues.

This, then, is the treaty provision for foreign administrative assistance in the Chinese customs. The conventions of Peking of 1860 provided for the payment of certain indemnities from customs receipts. This led to the organization of a consolidated service under the direct control of the central Government. Accordingly, the British assistant to the Chinese Superintendent of Foreign Trade was elevated to the post of Inspector General of Customs in January, 1861, to exercise a general supervision over all things pertaining to the customs revenue and to foreign trade.

On November 15, 1863, Sir Robert Hart was appointed Inspector General of Customs with headquarters at Peking. The American Minister, Mr. Anson Burlingame, at that time made the statement, "Mr. Hart has deserved their (the Chinese) confidence. For two years past he has acted in the place of Mr. Lay, and by his tact and ability has won the regard of everyone. Our countrymen were particularly well pleased with him."

On February 10, 1898, the Tsung Li Yamen, which functioned in foreign affairs, in reply to a British note, stated that it agreed, in view of the immense preponderance of British trade with China over that of other countries, that the Inspector General of Customs should in the future as in the past be of British nationality. (In 1885 Sir Robert Hart resigned to accept the post of British Minister to China, recommending his brother as his successor. At first the Chinese suggested the appointment of an American and later a German to the post of Inspector General, whereupon Sir Robert Hart withdrew his resignation and retained his post as Inspector General until his death in 1911.)

CUSTOMS ADMINISTRATION

The customs administration is under the immediate direction of the Shui Wu Chu (Revenue Council), and the Inspector General functions directly under this branch of the central Government. The foreign personnel is of international character and has been presumed to reflect the proportionate interests which the various foreign nations have in China's foreign trade. Of the total number of 978 foreign employees in the Chinese Maritime Customs in 1923, however, one-half were British, about one-quarter Japanese, and only one-nineteenth American.

CUSTOMS FUNCTIONS

The Chinese Maritime Customs collects duties on imports and exports, duties on coasting trade in foreign-built bottoms, tonnage

dues on shipping, and transit dues. It has charge of lighthouses, harbor works, pilotage, and conservancy works. Since 1901 the native or regular customs within a 15-mile radius from each Maritime Customs station came under the direction of the commissioner of customs of that port. It must be borne in mind, however, that the Maritime Customs functions only at treaty ports. There are now about 50 Maritime Customs posts in China, which correspond somewhat to ports of entry in the United States. The Maritime Customs has under its jurisdiction the creation and management of a loan and indemnity service in connection with loans and indemnities secured by the customs revenues.

CUSTOMS VALUATIONS

The schedule of valuations as agreed upon in 1843, which supplemented the British treaty of 1842, had, by 1858, resulted in giving the Chinese more than a uniform 5 per cent *ad valorem*; hence, according to Article XXVI of the Tientsin treaty, provision was made for a revision of this schedule. A joint commission drafted a new schedule of valuations both for imports and for exports which embodied also 10 rules of trade, defining customs procedure, English equivalents of Chinese weights and measures, etc.

Article XXVII of the British treaty of 1858 provides that either contracting party may by six months' previous notice call for a revision of the tariff at the end of each 10-year period. Li Hung Chang, in 1896, made an unsuccessful effort to get the foreign powers to agree to a revision, rightly contending that China was not getting more than 2 or 3 per cent on the important items in its foreign trade under the schedule of valuations of the 1858 supplementary agreement.

The final protocol following the settlement of the Boxer uprising provided that the specific duties of the customs tariff on imports should be raised to an effective 5 per cent *ad valorem*. The commission for the adjustment of values chose the average market values for the three years 1898 to 1900. The new schedule became effective October 31, 1902.

During 1918 the second readjustment of values since 1858 was made, the international commission choosing the averages of the valuations for the years 1912 to 1915, inclusive. This schedule became effective in April, 1919. It provided that a further revision might be requested after two years following the close of the European war. The Washington conference likewise made provision for a postwar revision of valuations. Accordingly, in 1922, an international commission sat at Shanghai, at China's request, and again adjusted the values for the import tariff so as to give China an effective full 5 per cent *ad valorem* tariff. This schedule became operative January 17, 1923. Several important changes were also made in the customs rules which form a part of the schedule of duty-paying values. It is estimated that about 80 per cent of the aggregate value of China's imports pay duty on a fixed value basis as stipulated in this schedule, while about 20 per cent are subject to a direct 5 per cent *ad valorem* levy.

EXPORT TARIFF

The schedule of export values for duty-paying purposes, against which a 5 per cent rate is imposed, has not been revised since 1858, although certain alterations have been made which have not called for protests from the foreign powers.

FRONTIER CUSTOMS TARIFF

A special rebate of one-third on the regular import and export duties is granted on overland or frontier trade. The idea originated with a Russo-Chinese agreement, before China had railway connections with adjoining nations, to help an expansion in the overland caravan trade. Taking advantage of the most-favored-nation clause of their treaties, this special privilege has been appropriated by those neighbors who subsequently developed railway communications. For instance, the one-third saving in duty for Japanese goods entering Manchuria through Chosen (Korea) covers the freight charges and has resulted in probably 75 per cent of Japan's imports with Manchuria going by rail through Chosen instead of by sea to Dairen. At the port of Dairen, which is in the Japanese leased territory, there is a free-trade zone. By agreement with China the personnel of the Chinese customs, under the direction of a Japanese commissioner of customs, is employed in the Chinese customs service.

FUTURE CUSTOMS REVISIONS

The nine powers treaty of the Washington conference relating to China's customs tariff stipulates that immediate steps shall be taken looking to a special conference in China to prepare the way for the speedy abolition of likin, in accord with the treaties with China of Great Britain, the United States, and Japan, of 1902 and 1903. The special conference is empowered to authorize the levying of a surtax at a uniform rate of $2\frac{1}{2}$ per cent, with a special provision for a maximum 5 per cent ad valorem tax on articles of luxury, pending the conclusion of an agreement for the abolition of likin and the raising of the Chinese import tariff to a uniform $12\frac{1}{2}$ per cent ad valorem. The treaties above mentioned provide for the abandonment of likin and all other transit dues throughout China and the abolition of the institutions maintained for their collection, in lieu of which these treaty powers agree to a maximum additional $7\frac{1}{2}$ per cent ad valorem import tariff. The treaties also stipulate that taxation on native goods intended for export abroad shall in the aggregate not exceed $7\frac{1}{2}$ per cent ad valorem, and provide for an adjustment of the schedule of valuations every seven years.

CHINESE CUSTOMS PROCEDURE

UNITS OF CURRENCY, WEIGHT, AND MEASURE

Because of the lack of a uniform currency or a uniform standard of weights and measures, the foreign powers in treaty negotiations with China fixed the units of currency and weight for customs purposes.

All duties are payable on the basis of the haikwan tael, a fictitious unit equal to 584 grains of silver of 992.3 fineness. A tael is a Chinese ounce equal to $1\frac{1}{3}$ avoirdupois ounces of silver. The Chinese currency is based on a decimal scale, the mace being one-tenth of a tael, the candareen one-tenth of a mace, and the cash one-tenth of a candareen. The duties are paid in local taels or in Mexican dollars converted into haikwan taels at the prevailing bank rates of the day.

Weights are computed on the basis of the picul ($133\frac{1}{3}$ pounds avoirdupois), the catty ($1\frac{1}{3}$ pounds), and the liang ($1\frac{1}{3}$ ounces).

One Chinese chang is equal to 10 Chinese feet, or 141 English inches. One Chinese chih is equal to one-tenth of a chang, or 14.1 English inches.

These are the weights and measures fixed for customs purposes for the whole of China, but not those that are current throughout China otherwise.

ASCERTAINING VALUES FOR AD VALOREM DUTIES

Imports unenumerated in this tariff will pay duty at the rate of 5 per cent ad valorem; and the value upon which duty is to be calculated shall be the wholesale market value of the goods in local currency. This market value, when converted into haikwan taels, shall be considered to be higher than the duty-paying value by the amount of the duty on the goods and 7 per cent of the duty-paying value of the goods.

If the goods have been sold before presentation to the customs of the application to pay duty, the gross amount of the bona fide contract will be accepted as evidence of the market value. Should the goods have been sold on c. i. f. terms, that is to say, without inclusion in the price of duty and other charges, such c. i. f. price shall be taken as the value for duty-paying purposes without the deduction mentioned in the preceding paragraph.

FILING PROTESTS AGAINST ASSESSMENTS

The importer, if dissatisfied with the decision of the customs as to the value or classification of imported goods, or the amount of duty or charges assessed thereon, may, within 20 days after the filing of the application to pay duty or other customs entry, file a protest in writing with the commissioner of customs, setting forth specifically his objection thereto. Pending a final decision in the case, the merchandise may be released to the importer upon the deposit of full duties and such additional duties as may be claimed by the customs, provided that the case, in the opinion of the customs, can be heard satisfactorily after the release of the merchandise from customs custody. Upon the filing of protest the commissioner shall, within 15 days thereafter, review his decision, and if the protest is not sustained the case shall be referred to a board of arbitration, composed as follows: An official of the customs; a merchant selected by the consul of the importer; and a merchant, differing in nationality from the importer, selected by the senior consul.

Questions regarding procedure, etc., which may arise during the sittings of the board, shall be decided by the majority. The final finding of the majority of the board, which must be announced

within 15 days of the reference (not including holidays), will be binding upon both parties. Each of the two merchants on the board will be entitled to a fee of 10 haikwan taels. Should the board sustain the customs valuation, or in the event of not sustaining that valuation should it decide that the goods have been undervalued by the importer to the extent of not less than $7\frac{1}{2}$ per cent, the importer will pay the fees; if otherwise, the fees will be paid by the customs. Should the board decide that the correct value of the goods is 20 per cent (or more) higher than that upon which the importer originally claimed to pay duty, the customs authorities may retain possession of the goods until full duty has been paid and may levy an additional duty equal to four times the duty sought to be evaded.

INVOICES

In all cases, invoices, when available, must be produced if required by the customs.

DUTY-FREE ARTICLES

The following will not be liable to import duty: Foreign rice, cereals, and flour; gold and silver, both bullion and coin; printed books, charts, maps, periodicals, and newspapers.

A freight or part freight of duty-free commodities (gold and silver bullion and foreign coins excepted) will render the vessel carrying them, though no other cargo be on board, liable to tonnage dues.

Drawbacks will be issued for ships' stores and bunker coal when taken on board.

PROHIBITED ARTICLES

Except at the requisition of the Chinese Government, or for sale to Chinese duly authorized to purchase them, import trade is prohibited in all arms, ammunition, and munitions of war of every description. No permit to land them will be issued until the customs officials have proof that the necessary authority has been given to the importer. Infraction of this rule will be punishable by confiscation of all the goods concerned. The importation of salt is absolutely prohibited.

The importation of opium and poppy seeds is absolutely prohibited. The importation of the following articles is prohibited except under bond by qualified medical practitioners, druggists, and chemists: Morphia and cocaine and hypodermic syringes; anti-opium pills containing morphia, opium, or cocaine; stovaine, heroin, thebaine, ganja, hashish, bhang, *Cannabis Indica*, tincture of opium, laudanum, codeine, dionin, and all other derivatives of opium and cocaine.

FOREIGN GOODS IMPORTED FROM CHINESE PORTS

All foreign goods imported from a Chinese port, unless they are covered by exemption certificate or are exempted from duty by an entry on the cargo certificate issued at the port of shipment (cf. below, "Foreign goods sent to a Chinese port"), are charged duty according to the revised import tariff of 1922.

FOREIGN GOODS REEXPORTED TO FOREIGN COUNTRY

Foreign goods reexported to a foreign country within three years from the date of importation are passed free of duty and given a drawback for the amount of import duty originally paid on them, provided that they remain intact and unchanged in their original packages.

Goods of undoubtedly foreign origin, which have been in port more than three years or whose date of importation can not be traced, are passed free of duty on shipment to a foreign country.

FOREIGN GOODS SENT TO CHINESE PORT

Foreign goods, the particulars of whose importation can be traced, which remain in their original packages without these packages having been opened, are passed free of duty when shipped to another treaty port, and an exemption certificate is issued freeing them from duty at the port to which they are shipped.

FOREIGN GOODS SENT INLAND

Foreign goods sent inland for which a transit pass is taken out are charged transit duty at the rate of half the import duty originally paid on them. Goods which are free of duty are charged transit duty at the rate of $2\frac{1}{2}$ per cent ad valorem.

DUTY ON NATIVE GOODS EXPORTED

Native goods exported from a treaty port in China to a foreign country pay according to the schedule of the export tariff of 1858, reprinted in 1920 with certain alterations as made by the Chinese Government. Goods not enumerated in this schedule pay 5 per cent ad valorem.

Chinese goods moved from place to place in China are subject to inland taxation. But as an importer can escape payment of divers inland taxes on foreign goods shipped inland from a treaty port by taking out an inward transit certificate, the exporter of Chinese goods may escape payment of the inland taxes accruing on their way out by taking out an outward transit certificate. The transit dues, equal to half the export duty, are levied at the treaty port upon the arrival of the goods and are paid to the Maritime Customs. Transit certificates can be taken out only on goods destined to a foreign country. Native goods not covered by an outward transit certificate are subject, when moved from place to place, to internal taxes, usually greatly in excess of the dues imposed under transit certificate. In addition to the ordinary inland taxation, from which goods under transit pass are exempt, native goods shipped from one treaty port to another pay at the point of shipment full export duty, and at the port of destination a coast-trade duty equal to half the export duty. If the goods are subsequently shipped to a foreign country the coast-trade duty is refunded.

CHINESE GOODS IMPORTED FROM CHINESE PORT

Chinese goods imported from a Chinese treaty port are charged a coast-trade duty at half the rate of export duty; but the following

goods—Chinese factory products, rice, and raw cotton—although they pay export duty, are exempt from coast-trade duty.

CHINESE GOODS REEXPORTED

To a foreign country.—Chinese goods that have been imported from another treaty port and reexported to a foreign country within one year of their arrival in Shanghai are passed free of duty and given a drawback for the coast-trade duty paid on importation, provided that they remain in their original packages or have been granted permission to be repacked.

To a Chinese port.—Chinese goods that have been imported from a treaty port and are reexported to another treaty port within one year of their arrival in Shanghai, are passed free of duty, provided that they remain in their original packages.

BONDED CARGO

If applications are not entered with the customs for goods, or payment of duty is not effected within 15 days after their arrival, they must enter bond, either through the agents or the consignees. Bonded cargo may be released upon the payment of a fee of 5 taels for each invoice in addition to duties and storage dues. The time limit for storage in bonded warehouses is 12 months; the storage charges are determined by the nature of the article stored.

TONNAGE DUES AND DUES CERTIFICATE

Tonnage dues are payable at the rate of 4 mace per ton by vessels of more than 150 tons burden, and 1 mace per ton by vessels of 150 tons or under.

Tonnage dues having been paid, a four months' certificate is issued on clearance, from which date the vessel is exempt from tonnage dues.

CHINESE FACTORY PRODUCTS EXEMPTION

In order to encourage the manufacture in China of foreign-type products, the Chinese Government grants to factories and mills, foreign or Chinese, in China special privilege treatment, whereby their products pay a single duty once and are thereafter free from any further taxation. The British treaty of 1902, which makes provision for an increase in China's import tariff to a 12½ per cent ad valorem and a 7½ per cent ad valorem export duty, also provides for an excise of 10 per cent on products of foreign type manufactured by factories and mills in China—goods, however, paying this excise to be free of all export duties and consumption taxes. It also makes provision for a rebate of 10 per cent (out of a 12½ per cent ad valorem) of the import duty for all materials used in the manufacture in China of articles of foreign type. These provisions were made to protect British imports, especially yarns and cloths.

TIENTSIN TRADE WITH MANCHURIA

Tientsin enjoys special privileges in business with Manchurian trade marts such as Mukden, Harbin, Antung, etc. Foreign goods

having paid import duty or native goods having paid export and coast-trade duties may be sent to these ports without further duty treatment.

INTERNAL TAXES

It is only since the Taiping rebellion (1853-1867) that internal taxes in China have developed into a matter of serious concern. Since the Boxer disturbances of 1900, and more particularly following the revolution of 1911, these internal taxes have become severe handicaps to China's internal trade. China's standing army of upwards of a million men, who are allied with various independent military governors since the weakening of central Government authority over the Provinces after the downfall of the monarchy, is a drain on the country, being in the main responsible for the development of the numerous and irregular internal taxes.

There are but few American business men who are in intimate contact with the internal tax situation in China because they are mostly concerned only with the disposition of their goods or the purchase of Chinese goods at the principal treaty ports. On the other hand, American companies who follow their goods from the treaty ports to the consumers in the interior get these goods to the consumers with lighter tax burdens than when these commodities are left to reach them through the ordinary channels of trade.

VARIETIES OF INTERNAL TAXES

China's internal taxes on trade may be listed as follows:

Transit taxes.—By payment of one-half of the import duty, about $2\frac{1}{2}$ per cent ad valorem, foreign goods transported into the interior away from treaty ports are entitled to transportation to destination free of further taxes. Similarly, foreigners may purchase Chinese products in the interior and ship them to a treaty port with a transit pass for which they pay $2\frac{1}{2}$ per cent ad valorem tax. Theoretically the system is admirable, but in practice it is subject to irregularities. Inspection fees are charged at the likin barriers for examination of the goods covered with the pass, and more often than otherwise they are assessed a destination tax when they reach the Chinese consignees. Thus, in some cases, foreigners find it more profitable to pay the likin and other assessments than to take out transit passes, especially if the point in the interior is in relatively close contact with a treaty port.

Likin.—Of the various internal taxes, likin is the best known. The word is sometimes used by foreigners to cover all sorts of internal taxes on trade. The Government was obliged during the trying years of the Taiping rebellion to devise new forms of taxation. It was then that likin was instituted. The words "lee-kin" mean literally "one one-thousandth contribution." The original idea was a levy of one-tenth of 1 per cent on the value of commodities entering into the internal trade of the country. This would impose no great burden on trade; but it did not stop there. This tax has been increased to such proportions and has taken on such forms as to constitute a serious menace to foreign as well as native trade in the interior of China.

At one time likin constituted the only form of internal tax on trade. Originally it was a pure ad valorem tax, but it is now both ad valorem and specific. On the average, it amounts to about 2 per cent ad valorem, but in some sections it reaches as much as 5 per cent. In some cases the rate is high, but the schedule of valuations of commodities against which it is assessed is considerably below actual market rates.

As stated elsewhere in this chapter, one of the important items in the Washington conference agreements is an arrangement for the abolition of likin and other forms of internal taxes on trade.

Loti shui or destination tax.—A destination tax is almost universally applied in the interior of China on foreign goods shipped on transit passes when they reach the Chinese consumers. It is not a substitute for likin, but an additional tax. It averages about 2 per cent. The foreign treaty-power representatives have found this tax the most difficult against which to make effective protests.

Tung chuan or tung shui.—A through tax intended to replace other transit charges within a Province with one levy made at the first likin barrier would be of much advantage to the trade, even though the rate were double the usual likin. However, owing to lack of coordination in tax assessments and collections, this tax has not fulfilled its purpose, and hence has fallen in popularity.

Jen chuan and pao chuan.—Upon the basis of the agreement between the authorities and an association of producers or shippers, it is possible in some quarters to make lump-sum payments. It is no definite amount, but depends upon the strength of the organization as to the nature of the arrangements. Transportation and forwarding companies and larger concerns often find this arrangement satisfactory.

Monopoly hong taxes.—Following the general principle of farming out tax collections to the highest bidders, in some places certain Chinese hongs, or companies, are granted a monopoly of collecting production taxes for definite commodities. The taxes are paid to these hongs in a lump sum by the guild controlling a certain industry in a particular community. The members of the guild are assessed on a prorata basis for the taxes paid, and purchasers of the products in question pay this tax on a price basis as fixed by the guild to include the tax in question.

Ch'an hsiao shui, or production and consumption tax.—This form of tax obtains in certain sections of the country. For instance, in the Manchurian Provinces it is assessed in lieu of likin. It takes the form of one tax at the place of production and another tax at the place of consumption, averaging about 2½ per cent for each tax. It is fairly equitably administered in the three eastern Provinces.

Wine and tobacco taxes.—These probably represent the highest tax exactions on commodities of trade, but at the same time the larger concerns dealing in cigarettes and wines have been able to effect agreements whereby, through the payment of definite stated sums, goods bearing stamps indicating the payment have been more successfully marketed in the interior, without further embarrassments, than has been possible in general lines of trade. Here, again, there is considerable irregularity in the assessments in different sections, some Provinces raising the rates to almost prohibitive propor-

tions. In some sections of the country manufacturers of cigarettes have found it impossible at times to keep certain brands of cigarettes on a fixed price basis on account of increased tax exactions in that section, and they have been forced to withdraw these brands and to substitute others. Foreign wines and tobaccos pay an import duty of approximately 5 per cent, having the same status as other commodities in the import tariff.

Boat taxes.—Boat taxes exist throughout the country wherever there is boat traffic. They are numerous, and work on the basis of taxing the traffic what it will bear. Boat guilds, however, have some influence in holding the rate down to fairly reasonable proportions in some sections. Again, in some places the military officials have taxed the native boat traffic so heavily as to force many out of the business.

Railway goods taxes.—While there are certain agreements with some of the railways for paying lump-sum taxes in lieu of other internal exactions on commodities carried by these railways through the territory of likin barriers, yet, on the whole, the rail traffic is less hampered by these exactions than is native traffic otherwise. The Harbin customs returns of trade for 1923 show that Manchouli in north Manchuria has 10 different organizations for levying duties or taxes on goods. In north Manchuria the brigand organizations demand and collect regular tax levies on every cube of firewood prepared as fuel for steamers and on other commodities. In Mongolia an entirely new set of taxes for import and export trade has been devised and put into effect. One of the factors which has made for the success of the South Manchuria Railway is the exemption of likin charges for goods carried over the railroad. By way of contrast the junk traffic on the Liao River using the port of Newchwang is subject to likin charges. Internal tax barriers assess goods transported to and from trains away from treaty ports.

Peking Octroi.—Peking is not a treaty port. Upon entering the city gates foreign goods are assessed a 3 per cent ad valorem duty, in addition to the 2½ per cent transit dues in carrying the goods from a treaty port. Chinese goods pay 4 per cent octroi.

SUMMARY

In connection with the above taxes there is no uniformity as to impositions or methods of collection. Some taxes are imposed in one place and not in another; some are peculiar to certain Provinces. In some Provinces similar taxes take on different names. However, throughout the country generally, there are upwards of a thousand internal tax barriers, commonly called likin stations. These local taxes are handled under provincial rather than central Government auspices. Thus excepting transit dues practically none of the revenue collected from the above-mentioned taxes reaches the central Government. The provincial governors farm out the privileges to the highest bidders. Chinese merchants secure a certain amount of protection through their guild organizations, but on the whole are taxed more heavily than are foreign merchants. In other words, they have less protection.

It is to the interests of the provincial taxgatherer to discourage as much as possible the use of transit passes held by foreigners and covering foreign goods or native goods destined to foreign countries.

as the transit fees are collected by the customs and go to the central Government. The provincial authorities often make special inducements or place particular obstacles in the way of goods covered by transit passes so as to encourage the payment of likin or other internal taxes in lieu of transit dues. Thus the transit-pass system serves as a weapon tending to beat down the internal tax impositions on goods handled by foreigners.

It may thus be stated that foreign imports pay:

1. An import duty approximating 5 per cent ad valorem entitling reshipment to any other treaty port in China without further assessments.

2. An additional 2½ per cent duty when shipped to the interior—that is, to any place other than a treaty port—under a transit-pass system. In lieu of a transit pass, they may pay likin or similar taxes, or both; and also are likely to have to pay something in addition to the transit fees—at least, fees for examination at likin stations en route. To enter Peking an additional 3 per cent octroi tax is assessed, or, on the aggregate, 10½ per cent.

3. A destination tax of about 2 per cent when goods are shipped to the interior. This tax is imposed in most places in China at the time the goods reach the Chinese consignee after shipment on a transit pass.

Native or Chinese goods pay:

1. Approximately 5 per cent ad valorem duty when exported from a treaty port to a foreign country.

2. An additional 2½ per cent at port of arrival when shipped from one treaty port to another.

3. A 2½ per cent transit duty, or, in lieu thereof, the usual likin and similar charges plus the 5 per cent export duty, when purchased or shipped from the interior by a foreign merchant for export to a foreign country.

4. Likin and/or similar levies, when transported in the interior in any other way than above described.

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TRADE-MARKS, COPYRIGHTS, AND PATENTS

By Commercial Attaché Julian Arnold

TRADE-MARKS

Of all the factors that enter into the successful marketing of an imported article in China, one of the most important is its chop, or trade-mark. The chop, once it becomes widely known and associated with a particular kind and quality of goods, sells the goods. So potent is its influence with the buying public that its importance can hardly be overemphasized. The Chinese customer asks for the chop he knows and will not easily take any other. Clever imitation of a favorite trade-mark is about the only stratagem that succeeds in enticing him away from the line of goods which has gained his confidence. Similar goods at a lower price, but under a trade-mark which he can distinguish as different from that to which he has been accustomed, will not ordinarily tempt him.

Some manufacturers appear to have the opinion that on account of the low purchasing power of the masses, price is the only consideration with buyers in China. But of the 7,000,000 cans of condensed milk imported into China each year over 80 per cent is of one brand, which is sold at a higher price merely on the strength of its familiar trade-mark. Through years of advertising and use the Chinese have come to regard it as the only brand. Manufacturers of other brands have offered special inducements, prices 10 or 20 per cent lower than the favorite, but have succeeded in capturing very little of the trade. The owners of this trade-mark have guarded it with extreme jealousy, and have successfully protected it against many attempts at imitation.

At one time a certain brand of American underwear commanded a very extensive sale throughout China. Through effective advertising and by keeping up the quality of the goods the chop, or trade-mark, of this underwear came to be recognized by the Chinese public as the symbol of a superior article. Its sales amounted to an average of 500 cases a week. Unluckily the manufacturers took no steps to safeguard their trade-mark against imitations, and to-day there are several imitations on the market which after a period of years have now practically replaced the original. Thus, by his failure to protect his chop, the American manufacturer has lost a valuable market to competitors of another nationality, who have profited by his pioneering work.

The choice of a trade-mark for use in China should never be haphazard, but should be the result of careful consideration of many factors peculiar to the Chinese people. The trade-mark should be simple, graphic, and distinctive. As the Chinese masses have little acquaintance with the English language, words or names in English have no meaning for them. Furthermore, such words, so far as

the Chinese are concerned, are easily imitated, as the Chinese, unfamiliar with the letters of our alphabet, will often count the letters in a word, and if the general formation appears similar to that to which they are accustomed in connection with a certain trade-mark, they will confuse the genuine with an imitation. This result is almost certain where color and details of the mark seem to offer an equal similarity.

Pictures and graphic symbols easily understandable to the eye are the preferable forms of trade-marks for use in China, but if it is necessary to use words because the commodity is marketed elsewhere under such words as a trade-mark, great care should be taken to accentuate in advertising any distinctive features which might be difficult of imitation. In using a picture trade-mark it is advisable also to incorporate the name in the picture, as a double safeguard against the possibilities of imitation.

In the choice of pictures for trade-mark purposes much caution must be exercised to avoid selecting something which may not harmonize with Chinese customs or which may give offense to Chinese tastes and superstitions. For example, the dog does not stand high in Chinese regard and carries no complimentary significance when used for advertising purposes. A rabbit is far worse, and the use of a turtle would condemn from the outset the article carrying it as a trade-mark. A green hat carries a very sinister meaning, and Chinese refrain from wearing this color of headgear. There are many other phases of Chinese customs and points of view which, as distinguished from those obtaining in the West, must be given consideration before a choice is made of the trade-mark for articles designed for sale in China.

Hardly less care must be exercised in the translation of English into Chinese in the use of literature descriptive of American trade-marks or American products. For use in China, some manufacturers have distinctive trade-marks bearing Chinese characters; some have Chinese characters printed on the English labels; some, in order to preserve the original label and yet add sufficient Chinese descriptive matter to enlighten the public as to the character and application of the article, use special labels of transparent paper upon which are printed Chinese characters descriptive of the article. But in any use of Chinese characters it is necessary to exercise care against poor translations, or translations which carry misconceptions. Merely because a man is Chinese, does not necessarily qualify him to make a translation which will convey the right idea to the public. An American manufacturer who wished to market in China a product bearing his trade-mark had the characters translated into Chinese quite correctly, but, as ordinarily interpreted by the Chinese public, they meant something very different from the English interpretation. It was then necessary to change the translation and the character so as to convey the idea that the American trade-mark represented.

It is advisable to check, from several sources, translations into Chinese, if one wishes to be sure that the article will not be ridiculed or that the business will not be injured by the use of wrongly selected characters.

The protection of trade-marks in China is a matter of much importance to any manufacturer who would market in that country a commodity bearing a trade-mark and whose business might be damaged through placing upon the same market an imitation of this trade-mark. Now that the Chinese are developing modern manufacturing plants and are manufacturing articles similar to those imported from abroad, it becomes even more necessary that the trade-marks of foreign manufactured products be protected against Chinese imitations of these commodities.

The United States Government, in appreciation of the necessity of the development of the machinery for the proper protection of American trade-marks, prescribed in Article IX of its treaty of 1903 with China as follows:

ART. IX. Protection of trade-marks.—Whereas the United States undertakes to protect the citizens of any country in the exclusive use within the United States of any lawful trade-marks, provided that such country agrees by treaty or convention to give like protection to citizens of the United States:

Therefore, the Government of China, in order to secure such protection in the United States for its subjects, now agrees to fully protect any citizen, firm, or corporation of the United States in the exclusive use in the Empire of China of any lawful trade-mark to the exclusive use of which in the United States they are entitled, or which they have adopted and used, or intend to adopt and use as soon as registered, for exclusive use within the Empire of China. To this end the Chinese Government agrees to issue by its proper authorities proclamations, having the force of law, forbidding all subjects of China from infringing on, imitating, colorably imitating, or knowingly passing off an imitation of trade-marks belonging to citizens of the United States, which shall have been registered by the proper authorities of the United States at such offices as the Chinese Government will establish for such purpose, on payment of a reasonable fee, after due investigation by the Chinese authorities and in compliance with reasonable regulations.

During May, 1923, the President of China promulgated the Chinese trade-mark law and detailed regulations as enacted by the Chinese Parliament. Except for the recognition of the general principle of priority of use rather than priority of registration, the trade-mark law and regulations of China follow the Japanese and continental systems. The methods of adjudicating disputes, however, under the China trade-mark law are similar to those prescribed in the Japanese patent law.

The representatives of the treaty powers, whose nationals in China are under extraterritorial jurisdiction, are in communication with the Chinese Government for the purpose of securing for their respective nationals certain safeguards in harmony with their stipulated treaty rights, as precedent to the acceptance of the trade-mark law and regulations as applicable to the nationals of these powers. In the meanwhile many holders of foreign trade-marks have registered under the new law. In fact, a very large number of business houses in China seem to find it necessary to register their trade-marks to safeguard their interests.

Under date of September 15, 1924, the Bureau of Trade-Marks, issued a statement regarding the method of procedure in the registration of trade-marks. The substance of these regulations is as follows:

1. *Application*.—First, there should be drawn up an application, for which no official form is necessary. (For the convenience of applicants the Bureau of Trade-Marks in Peking has at its office printed forms which may be obtained

gratis on application in person or by letter.) The form should be rendered in duplicate for each trade-mark to be registered.

2. *What must accompany application.*—The application should be accompanied by the following:

(a) A zinc block of the trade-mark measuring not more than 4 inches by 4 inches (new standard measurement, i. e., 12.8 centimeters) in length and breadth and eight-tenths of an inch (i. e., 2.56 centimeters) in thickness.

(b) Five black and white prints of the block made on strong paper, not exceeding 5 inches by 5 inches (i. e., 16 centimeters).

(c) Ten colored specimens of the trade-marks, in case of colored trade-marks.

(d) The necessary fees.

(The above requirements are increased pro tanto in case the same trade-mark is for more than one class of goods.)

3. *Fees.*—The fees payable for each trade-mark for each class of goods are: (a) Application, Mex. \$5; (b) registration, Mex. \$40.

A trade-mark which is filed at the Bureau for Provisional Registration of Trade-Marks, Chinese Maritime Customs, Shanghai, 1919, and for which the requisite fee has been paid in connection therewith, is exempt from payment of the above-mentioned application fee of \$5, on production of the receipt of such payment and a certificate from the Chinese Maritime Customs, Shanghai, giving the date and number under which it is filed. This certificate should be attached to the application.

4. *Nationality of applicant.*—A foreigner should submit evidence of nationality. For this purpose a declaration signed by a consular official is admitted as evidence. In case of registered companies or corporations a declaration signed by the registrar of companies is also acceptable. The requirement of evidence of nationality applies also to agents acting on behalf of their principals.

5. *Authority of agents.*—Any person acting as agent for another in applying for the registration of trade-marks must be provided with a power of attorney, which, together with its translation in Chinese, must be presented to the China Trade-Mark Bureau at the time of application.

The owner of a trade-mark who has no residence or a business office in China must make his application through an agent having such residence or office. (Art. 8 of the trade-mark law.)

It appears that the China Trade-Mark Bureau has ruled that if priority of use in China can be established for a trade-mark over one that has had priority of registration, the cancellation of the latter may be effected by following the procedure stipulated in the trade-mark law.

The China Trade-Mark Bureau publishes a monthly gazette in English as well as in Chinese. The subscription price for the English edition is \$4.48 silver (including postage to foreign countries) per year. Arrangements have been made by the China Trade-Mark Bureau to secure the services of a foreign trade-mark expert through the International Trade-Mark Bureau at Berne. The bureau is planning to open branch offices at Shanghai and other important commercial centers in China.

COPYRIGHTS

No copyright law has been enacted by the Chinese Government. Americans desirous of securing protection for their copyrights in China are obliged to rely on Article XI of their commercial treaty of 1903, which reads as follows:

ART. XI. Protection of copyrights.—Whereas the Government of the United States undertakes to give the benefits of its copyright laws to the citizens of any foreign State which gives to the citizens of the United States the benefits of copyright on an equal basis with its own citizens:

Therefore, the Government of China, in order to secure such benefits in the United States for its subjects, now agrees to give full protection, in the

same way and manner, and subject to the same conditions upon which it agrees to protect trade-marks, to all citizens of the United States who are authors, designers, or proprietors of any book, map, print, or engraving especially prepared for the use and education of the Chinese people, or translation into Chinese of any book, in the exclusive right to print and sell such book, map, print, engraving, or translation in the Empire of China during 10 years from the date of registration. With the exception of the books, maps, etc., specified above, which may not be reprinted in the same form, no work shall be entitled to copyright privileges under this article. It is understood that Chinese subjects shall be at liberty to make, print, and sell original translations into Chinese of any works written or of maps compiled by a citizen of the United States. This article shall not be held to protect against due process of law any citizen of the United States or Chinese subject who may be author, proprietor, or seller of any publication calculated to injure the well-being of China.

It is suggested that those interested in securing protection for copyrights in China consult the American Legation at Peking.

PATENTS

Article X of the United States commercial treaty with China, 1903, reads as follows:

ART. X. Protection of patents.—The United States Government allows subjects of China to patent their inventions in the United States and protects them in the use and ownership of such patents. The Government of China now agrees that it will establish a patent office. After this office has been established and special laws with regard to inventions have been adopted it will thereupon, after the payment of the prescribed fees, issue certificates of protection, valid for a fixed term of years, to citizens of the United States on all their patents issued by the United States, in respect of articles the sale of which is lawful in China, which do not infringe on previous inventions of Chinese subjects, in the same manner as patents are to be issued to subjects of China.

The Government of China has not yet established a patent office. As China is only at the inception of modern industrialism, the question of protection of patents has not become one of commanding importance. However, it is advisable to protect certain devices against infringement, and the only means at present available for securing this protection is by making application to an American consulate in China, at the same time depositing the duly certified records of the patent granted by the United States Government. This will serve to place on record local evidence of the assertion of certain patent rights on a particular date and will indicate priority of use as a basis upon which protection may be claimed from the Chinese authorities in the event of infringement.

TREATIES REGARDING RECIPROCAL PROTECTION

The nationals of certain treaty powers in China are, by virtue of extraterritorial treaty rights, under the jurisdiction of their own respective laws and courts rather than those of China. The United States Government concluded agreements with certain of these powers for the reciprocal protection of inventions, copyrights, and trade-marks in China. Of these, that with Japan is probably the most significant to holders of American trade-marks, copyrights, and patents. The text of the agreement reads as follows:

ARTICLE I. Inventions, designs, and trade-marks duly patented or registered by citizens or subjects of one high contracting party in the appropriate office of

the other contracting party shall have in all parts of China the same protection against infringement by citizens or subjects of such other contracting party as in the dominions and possessions of such other contracting party.

ART. II. The citizens or subjects of each of the two high contracting parties shall enjoy in China the protection of copyright for their works of literature and art, as well as photographs, to the same extent as they are protected in the dominions and possessions of the other party.

ART. III. In case of infringement in China by a citizen or subject of one of the two high contracting parties of any invention, design, trade-mark, or copyright entitled to protection in virtue of this convention, the aggrieved party shall have in the competent territorial or consular courts of such contracting party the same rights and remedies as citizens or subjects of such contracting party.

ART. IV. Each high contracting party engages to extend to the citizens or subjects of the other contracting party the same treatment in China in the matter of protection of their commercial names as they enjoy in the dominions or possessions of such contracting party under the convention for the protection of industrial property signed at Paris March 20, 1883. "Hong" marks shall be considered to be commercial names for the purpose of this convention.

ART. V. Citizens of possessions belonging to the United States and subjects of Korea shall have in China the same treatment under the present convention as citizens of the United States and subjects of Japan, respectively.

ART. VI. It is mutually agreed between the high contracting parties that the present convention shall be enforced so far as applicable in any other country in which either contracting party may exercise extraterritorial jurisdiction.

All rights growing out of the present convention shall be recognized in the insular and other possessions and leased territories of the high contracting parties and all legal remedies provided for the protection of such rights shall be duly enforced by the competent courts.

ART. VII. Any person amenable to the provisions of this convention who possesses, at the time the present convention comes into force, merchandise bearing an imitation of a trade-mark owned by another person and entitled to protection under said convention shall remove or cancel such false trade-mark or withdraw such merchandise from market in China within six months from the date of the enforcement of this convention.

ART. VIII. Unauthorized reproductions by the citizens or subjects of one high contracting party prior to the operation of this convention of the works of literature and art, as well as photographs, of the citizens or subjects of the other contracting party published after the 10th of May, 1906, and entitled to protection in virtue of this convention shall be withdrawn from sale or circulation in China within one year from the date of the enforcement of this convention.

Particular attention may perhaps be directed to Article I of the above convention; and it should be specifically pointed out that the registration of trade-marks with the Japanese Patent Office in Tokyo is thereby provided as a necessary condition precedent, in order that the remedies contemplated by the convention may be available to Americans for the protection of their trade-marks against infringement, in the market of China, by Japanese subjects.

TRADE-MARKS, COPYRIGHTS, AND PATENTS IN HONGKONG

Hongkong is a British Crown colony, and Hongkong Ordinance No. 40 of December 10, 1909, prescribes the procedure for the protection of trade-marks and copyrights in the territory under the jurisdiction of the Hongkong authorities.

AMERICAN OFFICIAL AID

The American consular officers in China are ready at all times to render to Americans all possible assistance in connection with the protection of their rights covering trade-marks, copyrights, and

patents in China. Those desiring legal counsel in China in connection with this subject may obtain from the Bureau of Foreign and Domestic Commerce at Washington lists of attorneys at law in the principal commercial centers of China.

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AMERICANS IN CHINA

AMERICAN POPULATION IN CHINA

By Commercial Attaché Julean Arnold

American firms in China aggregate 617 and American citizens 12,530. According to the customs reports, there were in China 24 American firms and 410 resident Americans in 1882, compared with 32 American firms and 1,152 resident Americans in 1890. According to reports from the same source, other nationals resident in China for 1882, 1890, and 1923, respectively, numbered as follows:

Nationalities	1882	1890	1923
British:			
Firms.....	298	327	661
Residents.....	2,402	3,317	14,775
German:			
Firms.....	56	80	244
Residents.....	474	648	2,233
French:			
Firms.....	12	19	242
Residents.....	335	589	3,361
Russian:			
Firms.....	17	12	1,034
Residents.....	78	131	85,856
Japanese:			
Firms.....	12	29	4,067
Residents.....	472	883	201,704

One-half of the American citizens registered in China is embraced in the missionary population, which comprises 4,000 adults, of whom 2,500 are women and 1,500 men. The children of missionary parentage resident in China number about 2,100. Of Americans in the mercantile population, there are about 1,200 adult men, 700 women, and 600 children. In professional employment the figures show 200 men, nearly 200 women, and 180 children. United States Government service accounts for 175 men, 100 women, and 90 children. In the Chinese Government service we have 100 men, whose wives and children bring the total up to about 225. The register shows about 400 Americans of nonspecified occupations. This is probably due to difficulty in securing fully accurate data in consular registrations.

There is included in the American population in China a certain number of American-born Chinese, who, according to the United States Constitution, are entitled to American citizenship and who have claimed and continue to claim American citizenship. Of those, 400 are men, 250 women, and 600 children, making a total of 1,250.

The Philippine population in China is very small. It is, however, under the American flag, and includes, as registered in the consulates, 75 men, 50 women, and about 100 children.

If we allow for about 1,000 Americans who are resident in China but not registered at the consulates, it would about offset those of

the Chinese race who are registered, thus leaving the total number at about 12,000.

The largest American population in China is located at Shanghai, where there are nearly 4,000. At Shanghai the mercantile population is considerably in excess of that of the missionary element. In fact, over half of the American mercantile population in China is resident in Shanghai. Next to Shanghai is Tientsin, where we have a very large mercantile population, aggregating about 400. Hankow ranks third in American mercantile population and Hongkong fourth. As for those in professional pursuits, the Tientsin consular district, which includes Peking, has the largest number. This is accounted for by the fact that the Rockefeller Foundation's medical school and hospital at Peking carry a very large American personnel.

Canton and Hongkong absorb the bulk of the population of American-born Chinese, as practically all of the Chinese who have gone to America are from Canton. Shanghai shows a number of Americans of the Chinese race. These also are of Cantonese extraction. The Americans of Chinese race accredited to the Amoy consular district number about 90 and are Philippine born, hence, strictly speaking, might well be included in the Philippine population, the bulk of which is resident in Shanghai.

There are in the aggregate about 4,000 children of American parents resident in China, half of whom are of missionary families.

Of the 4,100 American women in China, 1,600 are unmarried, the majority engaged in missionary work. It is interesting to note that there are fewer single men than single women in the American population in China, there being but 1,400 unmarried men. The married men number about 2,500.

In short, the American population in China has increased fourfold during the past 20 years. This is indicative of the substantial development of American interests in the country.

Of American firms established in China, Shanghai can claim 3,200. This is in keeping with the commercial and industrial importance of that great city at the base of the Yangtze Valley, which has now become China's most populous city. Many American establishments in other sections of China are in reality branches of houses at Shanghai. In order of importance from an American trade standpoint, following Shanghai are Tientsin, Hongkong, Hankow, Canton, and Harbin.

The following table shows the number of American firms and American citizens in the various consular districts in China:

Consular districts	American firms	American citizens
North China:		
Harbin.....	32	104
Mukden.....	10	85
Antung.....	2	7
Kalgan.....	11	49
Dairen.....	7	43
Tientsin.....	95	1,904
Cheefoo.....	6	137
Tsingtao.....	12	69
Tsinan.....	4	472

Consular districts	American firms	American citizens
Central China:		
Nanking.....	12	1,041
Shanghai ¹	302	4,000
Hankow.....	28	1,300
Changsha.....	2	366
Chungking.....	17	259
South China:		
Foochow.....	6	474
Amoy.....	2	156
Swatow.....	8	108
Canton ²	30	1,377
Hongkong.....	30	537
Yunnanfu.....	1	42
Total.....	617	12,530

¹ Including 400 of Chinese race and Filipinos.

² Including 613 Chinese born in United States.

RIGHTS OF AMERICAN CITIZENS

The first foreign community in China of any commercial importance was the one that grew up in Canton, beginning at the end of the eighteenth century. Merchants of British and other nationalities resided there in considerable numbers until as late as 1840, transacting their business and pursuing their affairs generally without their respective Governments having come to any definite understanding with the Chinese Government relative thereto. Foreign residents were under strict Chinese regulations, and their business was confined to a semiofficial group of Chinese monopolists called the ko hong. The British merchants, preponderating in the community, were not satisfied with the situation at Canton, but to no avail were repeated efforts to conclude a treaty between Great Britain and China which would establish a more satisfactory basis.

The war of 1840 between China and Great Britain resulted in the treaty of Nanking, concluded in 1842, by which adjustment of many of the causes of dispute was undertaken and through which the acquiescence of the Chinese Government was obtained to an extension of the privileges accorded British subjects.

In 1844 the United States sent Caleb Cushing to China for the purpose of negotiating a treaty between the two Governments. Mr. Cushing arrived at the Portuguese port of Macao in February and immediately set to work. In June the Imperial Chinese commissioner arrived, and after a fortnight's negotiations the treaty of 1844 between the United States and China was signed at the village of Wanghia, near Macao. The British treaty was accepted as its basis, but the American commissioner did not fail to consult the American community as to the modifications that should be made.

This document, supplemented by subsequent American and other treaties and by usage, constitutes the foundation of the rights enjoyed by American citizens in China to-day. Most of the treaties concluded by China with foreign nations provide that the citizens of such foreign nations shall enjoy all of the privileges accorded to "the most favored nation"; and the rights enjoyed by American citizens in China, therefore, include all rights granted to the citizens or subjects of any nation more favored. European and American merchants residing in Canton had developed evidence that the Chinese

judicial system was unsuited for application to the citizens of modern Christian nations, and it was provided in the treaties of 1842 and 1844 that British and American citizens residing in China should be amenable to the jurisdiction of their own courts.

TREATY OF 1844

The more important subjects dealt with in the treaty of 1844 are summarized in the succeeding paragraphs.

Tariffs.—Since a fixed scale of import and export tariff duties was of great importance to the merchants, the treaty provided that American citizens should pay these duties in accordance with a tariff which was made a part of the treaty. The intention was to fix the duty at approximately 5 per cent ad valorem, which rate was confirmed in subsequent treaties and continues to the present day.

Treaty ports.—Prior to 1842 the residence of foreigners had been restricted to Macao and Canton. The new treaty provided that foreigners might reside at four additional ports—Amoy, Foochow, Ningpo, and Shanghai. Subsequent treaties opened "ports" in all parts of the country generally, but not always on the seacoast or on rivers; and in addition to these places the Chinese Government has of itself designated "self-opened ports" as places wherein foreigners may reside and transact business.

Consuls.—The treaty provided that the American Government might appoint consuls or other officers "for the superintendence and negotiation of the concerns of citizens of the United States" doing business at the open ports. It further provided that American citizens should be permitted to hire Chinese for the performance of "any necessary service" without interference on the part of local officers of the Chinese Government.

Internal taxation and prohibition of monopolies.—An important article of this treaty is the one that permits citizens of the United States engaged in the purchase or sale of goods, of import or export, to trade with any and all subjects of China without distinction, and provides that they shall not be subject to any new limitations nor impeded in their business by monopolies or other injurious restrictions. The internal taxation of commerce, principally of merchandise in course of transportation, is a serious factor; and the treaty wisely provided that all such internal taxation of goods of import or export might be compounded by the payment of an additional 2½ per cent transit tax.

The injunction against monopolies has been of great service in keeping open to American citizens lines of enterprise that might have been closed by monopolistic concessions.

Recovery of debts.—The treaty provides that a debtor shall be sued in his own court, the redress in each case being sought through the assistance of the American consul—that is to say, an American creditor seeking to recover his money shall present his complaint to his consul, who will thereupon negotiate with the competent Chinese local authority to obtain satisfaction of the debt; and if a Chinese citizen is creditor he shall file his suit in the American consular court.

Residence in open ports.—Although four additional ports were opened to foreign residence and trade by the earliest treaties, such residence was strictly circumscribed. No particular areas were provided for at the open ports, but in later years areas known as “concessions” and “settlements” were, at many of the treaty ports, assigned either to one nation or to foreign nations in general, and in such districts foreigners might reside under the municipal control of the nation or nations concerned. The “area of open ports” is a matter that has no so far proved itself susceptible to rigid definition.

Chinese protection of American citizens.—The treaty provides that citizens of the United States in China who peaceably attend to their own affairs shall enjoy for themselves and everything appertaining to them the special protection of the local authorities, who shall defend them from all insult or injury of any sort on the part of the Chinese; and that if the consul shall warn the local authorities of impending danger from mobs or other lawless persons the local authorities shall immediately dispatch a military force to disperse such rioters, apprehend the guilty individuals, and punish them with the utmost rigor of the law. It is on the basis of this and similar provisions of the treaties, under which the Chinese Government assumes, on its own behalf and on behalf of the provincial authorities, an especial responsibility for the protection of foreigners residing or traveling in China in conformity with rights granted them by the treaty, that foreign governments hold the Chinese Government to strict account in such matters.

Extraterritorial jurisdiction.—It is expressly provided that Chinese citizens guilty of any criminal act toward citizens of the United States shall be arrested and punished by the Chinese authorities according to the laws of China, and, reciprocally, that citizens of the United States who may commit any crime in China shall be subject to trial and punishment by the consul or other public functionary of the United States authorized thereto, according to the laws of the United States. To provide the machinery required by this system of extraterritorial jurisdiction, the United States Government has created a consular court (of which the consul or consul general is the judge) in each consular district, and the United States Court for China, a court of original and appellate jurisdiction over all American citizens in China.

Communication between Americans and Chinese authorities.—The treaty provides that American citizens desiring to communicate with the Chinese authorities shall do so through the American consuls, and that Chinese citizens desiring to communicate with American consuls shall do so through the Chinese authorities. This provision undoubtedly serves to prevent a great deal of friction between the citizens and officials of the two nationalities.

Suits between Americans and other foreign residents.—The treaty provides that controversies occurring in China between citizens of the United States and citizens of any other government not Chinese shall be regulated by the treaties existing between the United States and such governments. Consequently, in the case of the foreign plaintiff, the defendant being an American, the action is brought in an American consular court. If the defendant is a foreigner of

another extraterritorial power, the suit is brought in a court of the defendant's nationality. If the plaintiff is an American and the defendant a foreigner not possessed of extraterritorial rights, the suit is brought in a Chinese court.

TREATY OF 1858

In 1858 another treaty was negotiated between the United States and China largely reaffirming the older one.

Immunity from religious persecution.—The treaty of 1858 guarantees that no person, whether Chinese or American, engaged in peaceably teaching or promoting the principles of Christianity shall be molested or interfered with. This article of the treaty has been frequently invoked for the assistance of the missionary enterprises conducted in China by citizens of the United States, although it should be stated that, by and large, neither the authorities nor the citizens of China have ever shown pronounced antagonism to Christianity or to Christian missionaries.

Most-favored-nation treatment.—Allusion has already been made to the most-favored-nation clause which is found in most treaties between foreign countries and China. In the treaty of 1858 it was agreed that should China at any time "grant to any nation, or the merchants or citizens of any nation, any right, privilege, or favor connected either with navigation, commerce, political or other intercourse which is not covered by this treaty, such right, privilege, and favor shall at once freely inure to the benefit of the United States, its public officers, merchants, and citizens." It is this clause and similar ones found in other treaties that have given to the citizens of all countries having such agreements with China what amounts substantially to a common body of rights in the country, and that have created a remarkable uniformity of interests.

TREATY OF 1880

In 1880 there was negotiated a short supplementary treaty, the most important provisions of which are summarized as follows:

Trade in opium.—It was agreed that Chinese and American citizens should be prohibited absolutely from engaging in trade in opium between the two countries. This prohibition was subsequently embodied by Congress in legislative enactments.

Assessors.—The treaty elaborates the method by which the citizens of one country may secure legal redress from the citizens of the other, by adding that a properly authorized official of the plaintiff's nationality may attend the trial, which, as already stated, must be held in the court of the defendant's nationality. This official, who is called an "assessor," is to be granted all proper facilities for watching the proceedings in the interests of justice. He may present, examine, and cross-examine witnesses, and if he is dissatisfied with the proceedings he may protest against them in detail. In cases of original jurisdiction the judge is generally a Chinese district magistrate and the assessor a vice consul; in appealed cases the judge is customarily the provincial commissioner of foreign affairs and the assessor may be a consular officer of higher rank.

COMMERCIAL TREATY OF 1903

In 1903 a commercial treaty was negotiated between China and the United States which was designed to enlarge the status of American citizens in China so as to make it more in accord with the changed conditions of their economic and social environment. It also provided additional facilities for the protection of American interests, such as copyright and trade-mark protection.

Open ports.—The treaty is most specific in defining the rights of American citizens at ports or localities open to foreign residence and trade. It states that American citizens at such places may "carry on trade, industries, and manufactures or pursue any lawful avocation" and may rent or purchase houses or rent or lease land in perpetuity and build thereon.

Mining regulations.—The treaty provides that the Chinese Government shall enact mining regulations which, "while promoting the interests of Chinese subjects and not injuring in any way the sovereign rights of China, will offer no impediment to the attraction of foreign capital, nor place foreign capitalists at a greater disadvantage than they would be under generally accepted foreign regulations." Up to the present time no such regulations have been agreed upon. Consequently the employment of American capital in mining enterprises in China is attended with many difficulties.

Trade-mark regulations.—The Chinese Government, the treaty provides, shall arrange for the establishment of offices for the registration and protection of trade-marks in accordance with "reasonable regulations." Attempts have been made by the Chinese Government from time to time to provide these essential facilities, but at the present writing no regulations which have been promulgated by the Chinese Government have been of a nature to receive the unqualified approval of the foreign governments. There have been trade-mark regulations promulgated, however, under which, to a certain extent, foreign citizens have registered their trade-marks, but without the formal acceptance of these regulations by their respective governments.

Patents and copyrights.—The Government of China has not yet established a patent office nor provided machinery for the protection of patents. Protection to copyrights is provided under the terms of the treaty, but the subject can not be considered to have been satisfactorily disposed of.

Inland steam navigation.—The treaty confirms regulations issued by the Chinese Government in 1898 opening "the navigable inland waters of the Empire to commerce by all steam vessels, native or foreign, that may be specially registered for the purpose, for the conveyance of passengers and lawful merchandise," and provides that American citizens, firms, and corporations may engage in such commerce on equal terms with those granted to the citizens of any foreign power. As an instance of the restricted interpretation which is sometimes offered upon treaty provisions, however, it may be noted that Chinese authorities are not always inclined to admit to vessels of native type the navigation rights thus granted steam vessels. In one of the Provinces the question has recently arisen of the right, under the treaty, of an American firm to own and operate craft of

native type on inland waterways for the transportation of its own merchandise.

Missionary enterprise.—The treaty reaffirms with greater minuteness the freedom of American and Chinese citizens alike to practice and peaceably teach the principles of Christianity. Since a great deal of American money has been invested in real property in China for the purposes of missionary work, it may be pertinent to quote verbatim the wording of the treaty, as it is the latest definition of the rights under which such land is acquired.

Missionary societies of the United States shall be permitted to rent and to lease in perpetuity, as the property of such societies, buildings or lands in all parts of the Empire for missionary purposes and, after the title deeds have been found in order and duly stamped by the local authorities, to erect such suitable buildings as may be required for carrying on their good work.

Extraterritoriality.—The United States Government agrees in the treaty of 1903 to give every assistance to the Chinese Government in the re-formation of its judicial system and indicates its readiness "to relinquish extraterritorial rights when satisfied that the state of the Chinese laws, the arrangements for their administration, and other considerations warrant it in so doing." Recent internal dissensions in the country and the consequent delay in perfecting the Chinese judicial system, as well as the weakening of the general administrative system, have tended to caution foreign nations against a too precipitate relinquishment of the extraterritorial position in China.

PRESENT TREATMENT NOT EXHAUSTIVE

The foregoing is no more than a brief summary of the more important aspects in which the treaties between the United States and China have established the foundations of American life and enterprise in that country. There are many subjects, controversial and otherwise, discussed in the treaties, to which the limitations of space permit no allusion here. The reader is referred to the treaties concluded by China with foreign nations and to the many instructive and interesting books which have been written about them, also to officials of the United States Government, for more specific information in regard to the rights and privileges enjoyed by American citizens in their pursuits in China.

AMERICAN COURTS IN CHINA

By Charles Sumner Lobingier, Formerly Judge of the United States Court for China

The United States seems to have been the first power to commission a consul in China. The other countries do not appear to have sent such representatives until after the treaty of Nanking in 1842 had opened five great ports to trade.¹ But as early as 1790 Maj. Samuel Shaw,² who had arrived at Canton in 1784 as supercargo of the ship *Empress*, was given a commission³ as American consul at Canton by President Washington.

¹ Williams, *The Middle Kingdom*, II, 567.

² A sketch of Major Shaw and an account of the voyage appears in Asa, XVI, in an article by John Ford, entitled "Outward Bound."

³ Reprinted in *American Journal of International Law*, V, 426.

But Americans, as well as others, found it impracticable to live and conduct business under existing native laws, which were fundamentally different from those to which they had been accustomed. The Chinese authorities, too, found it annoying, and often embarrassing, to decide questions and dispose of cases involving the rights of foreigners, and they desired to be relieved of the whole burden.

The solution of this common difficulty was found in the adoption by China of the system known as extraterritoriality, by which foreigners were accorded the same legal status as if living in their own country, and the authorities of each treaty-making power were made responsible for punishing crime and administering justice among their own nationals.

There was, of course, nothing novel in the adoption of the system in China, for it had long been in vogue in other parts of the world. Indeed, there is reason to believe that it was once in vogue everywhere. An eminent authority⁴ has recently said:

We venture to suggest, with diffidence, that the naturalness of the extraterritorial privilege as explained by the author might be more emphatically illustrated by the "personality" of all law, as distinguished from its "territoriality," which prevailed throughout the vast Carovingian Empire till nearly 1000 A. D.; that is, instead of saying, with the author, that extraterritoriality was "in accordance with usage which became generally recognized with the gradual extension of commerce," we should prefer to believe that it was in accord with a universal prior custom prevailing in the first half of the Middle Ages.

For the United States this arrangement with China was effected by the treaty⁵ signed at Wanghia, a suburb of Macao, on July 3, 1844. It was drafted by Caleb Cushing, afterwards Attorney General of the United States, and Article XII provided that "citizens of the United States who may commit any crime in China shall be subject to be tried and punished only by the consul, or other public functionary of the United States thereto authorized, according to the laws of the United States";⁶ and Article XXV declared that "all questions in regard to rights, whether of property or person, arising between citizens of the United States in China, shall be subject to the jurisdiction of and regulated by the authorities of their own Government. And all controversies occurring in China between citizens of the United States and the subjects of any other government shall be regulated by the treaties existing between the United States and such governments, respectively, without interference on the part of China."⁷

ORGANIZATION

CONSULAR COURTS

The "authorities" to which this extensive responsibility was committed were the consuls, and, as each consul became thereby a judge, the consular courts were thus brought into existence. For more than 60 years these, as reviewed and supervised by the Minister, were the

⁴ John H. Wigmore, reviewing Brown's "Foreigners in Turkey," *Illinois Law Review*, X, 451.

⁵ "Its fullness of details and clear exhibition of the rights conceded by the Chinese Government to foreigners dwelling within its borders made it the leading authority in settling disputes among them until 1860." Williams, "The Middle Kingdom," II, 567.

⁶ Malloy, *Treaties, etc.*, I, 202.

⁷ *Id.*, 203.

only American courts in China. Their jurisdiction as to subject matter was unlimited,⁸ and questions coming before them were often of the highest importance.

In 1906, when the United States Court for China was created, the jurisdiction of the consular courts was left to be exercised "in civil cases where the sum or value of the property involved in the controversy does not exceed five hundred dollars United States money and in criminal cases where the punishment for the offense charged can not exceed by law one hundred dollars' fine or sixty days' imprisonment, or both, and shall have power to arrest, examine, and discharge accused persons or commit them to the said courts."⁹

There are now 15 American consular courts in China, and it will be seen that the jurisdiction retained by them is important, even if limited. Especially in the probate of wills and administration of estates they are the only courts to which a considerable section of Americans in China have occasion to resort.

UNITED STATES COURT

History.—As American interests in the Far East gradually expanded it became apparent that the important and far-reaching judicial power which the Nation had acquired there should be exercised, or at least supervised, by those trained especially for that purpose. Our ministers and consuls doubtless made the best of a difficult situation, but they were laymen, as a rule, and it was not to be expected that they should find themselves at home in the technical field of law.

In 1881 Secretary Blaine, in an opinion which was transmitted to Congress by President Arthur, recommended that "men of legal training should be chosen for certain judicial offices independent of the consular system, and the establishment of a separate system of courts, at least in China, with an appellate court at Shanghai." Bills embodying these recommendations were introduced into Congress in 1882 and 1884, but were not acted upon. Nothing daunted, the advocates of a better system continued their efforts. In March, 1906, Congressman Edwin Denby, son of a former Minister to China, introduced his bill. It passed the House under his guidance, received the support of Senator Spooner in the Senate, and became a law.

Elsewhere,¹⁰ Mr. Denby has said of the conception and purpose of his measure:

I thought of our United States judge as much in the light of an ancillary, unofficial ambassador of the United States, as of a judge of a court for the trial of cases in which Americans were concerned. I had hoped at that time, judging of conditions as I had known them before, that this high judicial officer, the highest American official in the land next only to the minister, unhampered by diplomatic restrictions and with an eye single to the best interests of the Chinese Empire and of the United States, might, having placed himself on terms of friendship and confidence with the chief officials of the Empire, exercise in an entirely unofficial way a considerable influence in matters affecting foreign relations. The court's sittings were to be at the points indicated—four great viceregal seats—and I hoped that perhaps some good might

⁸ There are several recorded cases where they granted divorces; Moore, *Int. Law Dig.*, II, 459; North China Herald, LXIX, 1138, 1194.

⁹ Act of June 30, 1906, 34 U. S. Stat. L., Pt. I, 814, sec. 2.

¹⁰ Far Eastern American Bar Association Publications, I, 14, 15.

be accomplished through the influence of the court in an entirely unofficial and friendly way, relying upon the judge himself to exercise tact and discretion and to use whatever influence he might acquire in the best manner.

Thus to Dean Wigmore's conception of "a judicial superintendent," elsewhere noted, must be added that of Mr. Denby—of an "unofficial ambassador"—if we would comprehend the purposes that underlay the creation of the United States Court for China. How far these purposes have been carried out is not, of course, for those administering the court to say; but the latter can be materially assisted by their own nationals in attaining such purposes, if these are clearly understood and if all unite in seeking their achievement.

Both United States and consular courts exist in order to serve Americans in China and those who deal with them. The measure of their success is the degree of serviceability attained, and in this respect their founders anticipated and applied an ideal that is only now being diffused by the most advanced school of law reformers in America.

While nominally established by the act of June 30, 1906, the court was not actually opened for business until early in 1907. Of the nearly 700 cases disposed of by it since then, there have been some of unusual importance either in the legal questions arising or in the amounts involved.

Jurisdiction.—A court's jurisdiction may be considered under three aspects: (1) Territorial, (2) personal, and (3) topical—the last being known in technical parlance as jurisdiction of the subject matter. This third jurisdiction is again subdivided into (*a*) original, (*b*) appellate, and (in this instance) (*c*) supervisory.

The territorial jurisdiction of this United States Court extends to and its process runs throughout all Chinese territory. Sessions of the court are held almost continuously at Shanghai, and one regular term is held each year at Tientsin in the north, Hankow in Central China, and Canton in the south. Special sessions are authorized at any place in China having an American consulate. The organic act also conferred jurisdiction in Korea, but while this provision has never been repealed the jurisdiction has not been exercised in recent years. Should the Government ever decide to extend the court's jurisdiction to Siam, where extraterritoriality was granted in 1856,¹¹ it would require no more than the addition of a couple of words to the organic act and the slight expense of a yearly session at Bangkok.

The test of jurisdiction over the person in all these extraterritorial courts is the nationality of the defendant. Anyone may be a plaintiff, but there must be a defendant subject to American authority in order to confer jurisdiction. This includes Filipinos, of whom there are many in China, and also Porto Ricans, as well as regular American citizens, and all such in China are amenable to these courts in any cause, criminal or civil, which may be instituted therein against them. And where the cause is what is technically known as "in rem" (concerns property or status alone) it may be brought in these courts, though there is no such defendant, or even where the nominal defendant is an alien.¹² Original jurisdiction of the subject

¹¹ Treaty of May 29, 1856. Malloy, *Treaties, etc.*, I, 1629.

¹² See *Richards v. Richards*, United States Court for China, No. 424, where the defendant was a Chinese woman but the object of the action was divorce without alimony—i. e., change of status only.

matter is exercised by the United States Court in all cases arising within its territory which are not recognizable by the consular courts—that is, in all civil cases where the amount involved exceeds \$500 and in all criminal cases where the penalty prescribed exceeds “one hundred dollars fine or sixty days’ imprisonment or both.”¹³

It sometimes happens, especially in administration matters, that a cause is commenced in a consular court under the belief that it involves less than \$500 and is afterwards found to involve more. In that event it is transferred to the United States Court and the prior proceedings are treated as having been conducted under its authority.¹⁴ The grant of jurisdiction in “all civil cases” of the prescribed amount is an extensive one and includes proceedings of every recognized class without limit as to the maximum amount or character of relief sought. Thus while the United States Court for China is a part of the Federal judicial system, corresponding in grade mainly to the district courts, it assumes cognizance of certain causes (such as probate, divorce, and adoption) which, in America, are entertained only by the State courts. The amounts involved are often very large, running into hundred of thousands.

All judgments of the consular courts are subject to review by the United States Court for China on appeal, while from the latter, which is considered as located in the ninth judicial circuit, appeals lie to the court of appeals sitting at San Francisco.

But besides its ordinary appellate cognizance the United States Court also exercises a supervisory or administrative jurisdiction in all probate and administration causes, whether appealed or not. Thus it is provided that the consular judge “shall pay no claims against the estate without the written approval of the judge of said (United States) court, nor shall he make sale of any of the assets of said estate without first reporting the same to said judge and obtaining a written approval of said sale * * *.”¹⁵ The latter is also empowered “to require at any time reports from consuls or vice consuls in respect of all their acts and doings relating to the estate of any such deceased person.”¹⁶ The statute further provides “that the procedure of the said court shall be in accordance, so far as practicable, with the existing procedure prescribed for consular courts in China in accordance with the Revised Statutes of the United States: *Provided, however,* That the judge of the said United States Court for China shall have authority from time to time to modify and supplement said rules of procedure.”¹⁷

The relation between the two is, therefore, something more than that usually existing between appellate and “*nisi-prius*” courts. What Congress apparently intended by this, particularly as regards probate and administration matters, was the creation of an office resembling the “chief judicial superintendent” of the up-to-date law reformers, who is invested, among other things, with the rule-making function.

¹³ U. S. Stat. L., ch. 3934, sec. 2.

¹⁴ In *re Jaeger's Estate* (Apr. 26, 1918), No. 613, Millard's Review, IV, 374.

¹⁵ Act of June 30, 1906, 34 U. S. Stat. L., ch. 3934, 1st I, 814, sec. 2.

¹⁶ *Id.*

¹⁷ *Id.*, sec. 5.

John H. Wigmore, a leader of advanced legal thought in America, expresses¹⁸ this conception as follows:

What we preach is a chief judicial superintendent, who shall have the power and the duty to inquire into each and every sort of botch-product of our justice system, and to take measures to improve it against the recurrence of such failures. When the people bring themselves to permitting and demanding such an innovation, they will be in a fair way of getting substantial improvements in their justice—but not before then.

JURISPRUDENCE AND LEGISLATION

LAWS OF THE UNITED STATES

The treaty cession to the United States Government of extraterritorial jurisdiction from China was first rendered effective by the act of Congress of August 11, 1848, which contained the following provision:

Such jurisdiction in criminal and civil matters shall, in all cases, be exercised and enforced in conformity with the laws of the United States, which are hereby, so far as is necessary to execute said treaty, extended over all citizens of the United States in China (and over all others to the extent that the terms of the treaty justify or require), so far as such laws are suitable to carry said treaty into effect.¹⁹

In 1860 a more elaborate act²⁰ was passed in which the foregoing section was almost literally repeated, so that it affords the basis of American jurisprudence in China.

The practice of extending over one jurisdiction laws originally passed for another is not new in American jurisprudence. It was often resorted to during the formative period of western America when new territories were created. Thus the laws of Iowa were extended over the newly formed Territory of Nebraska in 1855, while a generation later the Nebraska laws were extended to Oklahoma, organized in 1889. Meanwhile, in 1884, the laws of Oregon had been extended over Alaska.²¹

It is said²² also that the laws of Arkansas were once extended over the Indian Territory.

Congress had applied the same principle as early as 1825, when it extended the criminal laws of each State over all Federal territory and property within its boundaries,²³ thus making a violation of such State law "an offense against the United States."²⁴ Congress was merely following precedent, therefore, in enacting the laws above noted.²⁵

"What are 'the laws of the United States' referred to so frequently in these quotations?" is the question sought to be answered as follows in one²⁶ of the earliest cases presented to the writer after he had assumed charge of the court:

Not the treaties, for they are mentioned separately; hardly the Constitution, for it has been declared²⁷ to have no extraterritorial operation; certainly not

¹⁸ Illinois Law Review, XI, 49.

¹⁹ 9 U. S. Stat. L., 276, sec. 4.

²⁰ 12 U. S. Stat. L., 74, sec. 4.

²¹ United States ex rel. Raven v. McRae, United States Court for China, No. 586, Millard's Review, I, 7.

²² Hearing before Committee on Foreign Affairs, Sept. 27, 1917; H. R. 4281, p. 6.

²³ 4 U. S. Stat. L., ch. LXV, sec. 3.

²⁴ Bliddle v. United States, 156 Fed. 759, 763.

²⁵ United States ex rel. Raven v. McRae, Millard's Review, I, 7.

²⁶ United States v. Allen, United States Court for China, No. 89.

²⁷ In re Ross, 140 U. S., 433, 35 Law Ed. 581.

State legislation; principally, therefore, the acts of Congress then or subsequently in force. And their extension results quite independently of the original purpose of the acts themselves. Thus Congress may enact a law for a limited area under its exclusive jurisdiction, such as Alaska or the District of Columbia; by its terms it may have no force whatever outside of such area; but if it is "necessary to execute such treaties" (with China) and "suitable to carry the same into effect" it becomes operative here by virtue of the act of 1860 above quoted. Such we understand to be the doctrine announced by the Court of Appeals in a leading case.

This last²⁸ was a prosecution for obtaining money under false pretenses, and in upholding the lower court's jurisdiction of such a crime the appellate tribunal observed:

It is true there is no general statute applicable to every State in the Union making this an offense against the United States; nor could there be, in view of the fact that under our system of government the right to punish for such acts, committed within the political jurisdiction of the State is reserved to the several States. But in legislating for territory over which the United States exercises exclusive legislative jurisdiction, Congress has made the act of obtaining money under false pretenses a crime * * *.

In view of the legislation of Congress to which we have referred (the acts relating to Alaska and the District of Columbia, and the statute of July 7, 1898), our conclusion is that obtaining money or goods under false pretenses is an offense against the laws of the United States within the meaning of the statute conferring jurisdiction upon the United States Court for China.²⁸

Though the laws there involved were criminal ones, the fundamental basis of the decision applies equally well to civil laws which have since been treated by the United States Court for China²⁹ as extended here.

For there can be no half-way adoption of that doctrine; it includes all such laws or none. It can not logically be restricted to any particular class of acts. It is just as applicable to civil laws as to criminal; just as necessary in respect to corporations as to procedure.³⁰

It is true that the phrase "law of the United States" as used in one paragraph of that section of the Judicial Code³¹ relating to appeals has been construed as not including an act of Congress for the District of Columbia.³² But the "ratio decidendi" was the declared purpose of the paragraph to limit appeals,³³ and it was conceded that the same phrase in another paragraph might be construed differently.³⁴ In fact, it had been so construed in an earlier case³⁵ which was not overruled by those above cited. Moreover, in a decision later than any of them the Supreme Court in construing a similar statute³⁶ regulating appeals from the Philippines declared the Philippine tariff act, which applied to the archipelago alone, "a

²⁸ *Biddle v. United States*, 156 Fed. Rep. 759.

²⁹ *Cavanaugh v. Worden*, No. 313.

³⁰ *United States ex rel. Raven v. McRae*, No. 586, Millard's Review, I, 9.

³¹ Sec. 250; 36 U. S. Stat. L. 1159.

³² *American Security, etc., Co. v. District of Columbia*, 234 U. S. 491, 56 Law Ed. 856, 32 Sup. Ct. 553; *Washington, etc., R. Co. v. Downey*, 236 U. S. 190, 59 Law Ed. 533, 35 Sup. Ct. 406; *American Surety Co. v. American Fruit Product Co.*, 238 U. S. 140, 59 Law Ed. 1238, 35 Sup. Ct. 828; *American Security, etc., Co. v. Rudolph*, 38 App. Cas. (D. C.) 32.

³³ *American Security, etc., Co. v. District of Columbia*, 224 U. S. 491, 56 Law Ed. 856; 32 Sup. Ct. 553.

³⁴ "Of course there is no doubt that the special act of Congress was in one sense a law of the United States. It well may be that it would fall within the meaning of the same words in the third clause of the same section: 'Cases involving the constitutionality of any law of the United States.'" *Id.* Cf. *American Surety Co. v. American Fruit Product Co.*, 238 United States 140, 59 Law Ed. 533, 35 Sup. Ct. 406.

³⁵ *Parsons v. District of Columbia*, 170 U. S., 45 Law Ed.

³⁶ 36 U. S. Stat. L., Ch. 1369, sec. 10.

statute of the United States.³⁷ The doctrine of the Court of Appeals would seem, therefore, to be quite consistent with that of the Supreme Court.

It appears to be settled then that the phrase, "laws of the United States," as used in the legislation first above quoted, includes all applicable acts of Congress regardless of the locality for which they were originally intended. This rule provides for American courts in China a mass of legislation without which they would be sadly handicapped; for the general acts of Congress contain little concerning the subjects with which those courts are most called upon to deal, such as crimes, domestic relations, contracts, etc. It happened, however, that, shortly before the establishment of the United States Court for China, Congress had enacted for various jurisdictions a series of fairly satisfactory codes and statutes, which covered these and kindred subjects, and which, by the rule above stated, were rendered available to said courts.³⁸ Where two or more of such acts cover the same subject and are equally suitable, a rule of statutory construction as old as the Twelve Tables³⁹ requires that the latest enactment be applied. Moreover, although Alaska was provided in 1913 with a legislature of its own, Congress will doubtless continue to legislate indefinitely for the District of Columbia, and a fair supply of new legislation may be expected from that source. The statutory equipment of American courts in China is, therefore, on the whole, about as complete as that of most courts.

UNWRITTEN LAW

In any jurisdiction there are, of course, many subjects not covered by legislation and these "lacunæ" were early provided for in extra-territorial countries by enacting that "in all cases where such laws are not adapted to the object, or are deficient in the provisions necessary to furnish suitable remedies, the common law, including equity and admiralty, shall be extended in like manner over such citizens and others in the said countries."⁴⁰ The "common law" here specified has been "interpreted to mean those principles of the common law of England and those statutes passed in aid thereof, including the law administered in the equity, admiralty, and ecclesiastical tribunals, which were adapted to the situation and circumstances of the American colonies at the date of the transfer of sovereignty, as modified, applied, and developed generally by the decisions of the State courts and by the decisions of the United States courts, and incorporated generally into the statutes and constitutions of the States."⁴¹

³⁷ *Gsell v. Insular Collector*, 239 U. S. 93, affirming 24 Philippine 369, which in turn affirmed the decision of *Lobingier, J.*, in *Philippine Law Rev.* 229-233.

³⁸ Act of Mar. 3, 1899, 30 U. S. Stat. L., 1253 et. seq. (Criminal Code for Alaska); act of June 6, 1900, 31 U. S. Stat. L., ch. 786 (Civil Laws for Alaska); act of Mar. 3, 1901, 31 U. S. Stat. L., ch. 854 (General Code for the District of Columbia); act of July 1, 1902, 32 U. S. Stat. L., ch. 1369 (Organic Act for the Philippines but, with its successor, containing provisions which may prove useful in China). This was supplemented though not entirely repealed by the act of Aug. 29, 1916, 39 U. S. Stat. L., ch. 416.

³⁹ XII, 5; 36 *Cyc.* 1130; *Cavanaugh v. Worden*, No. 313.

⁴⁰ Act of Congress of June 22, 1860, 12 U. S. Stat. p. 73, ch. 179, sec. 4.

⁴¹ *United States v. Biddle* (United States Court for China), *American Journal of International Law*, I, 793, 796, reversed on another point, 156 *Fed.* 759.

THE RULE-MAKING AUTHORITY

Finally, as supplementing all of the above, the act of 1860, following closely upon that of 1848, further provided that "if defects still remain to be supplied, and neither the common law, including equity and admiralty, nor the statutes of the United States furnish appropriate and suitable remedies, the ministers in the said countries, respectively, shall, by decrees and regulations which shall have the force of law, supply such defects and deficiencies."⁴²

In exercise of this authority, the Minister to China, prior to 1906, promulgated various "Consular Court Regulations,"⁴³ and these, though recognized in part as "gravely defective," have been given force in China even over acts of Congress.⁴⁴

A communication to the minister from the Department of State in 1917 announces "that the department is clearly of the opinion that section 5 of the act of June 30, 1906,⁴⁵ should be construed as effecting a transfer of the authority to modify and supplement existing rules of procedure from the minister to the United States Court for China."

Here, then, we have the "judicial superintendent," in fact if not in name, with not only "the power and duty to inquire into each and every" important act of the primary courts and to require reports from them but also to frame the rules by which all these courts shall operate. When it is remembered that American jurisprudence in China is a new field, and that these "rules of procedure" may be made to cover nearly the whole subject of remedial law, it will be seen that the possibilities involved in this idea of superintendency are very extensive.

Acting under this authority the writer has already promulgated rules for admission to practice in all of these courts⁴⁶ and has sent out, for comment and suggestion before promulgation, a draft of proposed rules of evidence⁴⁷ which aim to cover in brief space the whole field of that subject. So far as the growing business of the court will permit, it is the writer's intention to follow these with successive drafts of rules on various procedural subjects until the whole field of remedial law is completed. The full realization of that plan may have to be deferred for some time, but it will be pursued as steadily as conditions allow, for the opportunity is unique and the task inviting.

⁴² 12 U. S. Stat. L., ch. 179, sec. 4.

⁴³ Reprinted in Hinckley, *American Consular Jurisdiction in the Orient*, pp. 226-236.

⁴⁴ *U. S. v. Engelbracht* (United States Court for China, Oct. 25, 1909), *American Journal of International Law*, III, 735.

⁴⁵ See ante, p. 48.

⁴⁶ Millard's Review, IV, 68.

⁴⁷ Id., I, 164-168, 192-196; *American Bar Association Journal*, IV, 218, 242.

JUDICIAL PROCEDURE IN CHINA

By judicial procedure in China is meant not only Chinese judicial procedure but that of those other powers which maintain courts in China in accordance with the provisions of the system known as extraterritoriality. In respect to any claim involving court proceedings, therefore, the first step in determining what judicial procedure will apply is to make sure of the nationality of the defendant, since this factor determines the court in which the action must be brought. Claims against persons or firms in China naturally, then, fall into three classes: (1) Claims against Chinese; (2) claims against foreigners enjoying extraterritoriality; (3) claims against foreigners not enjoying extraterritoriality.

In accordance with the treaties granting extraterritorial privileges, the powers which negotiated such treaties with China have established courts in that country wherein claims and complaints against other nationals may be tried. Such courts are extraterritorial courts, but are more commonly known as consular courts, since the trial officers in general have been and still are officers of the Consular Service.

The laws which are applied when Chinese citizens are defendants are Chinese laws. When foreigners enjoying extraterritorial rights are defendants the laws of the country or countries of which they are citizens apply. If foreigners not enjoying extraterritorial rights are defendants, Chinese law is applied except in certain matters such as family questions and the like. The nationality of the plaintiff or complainant has no bearing upon the law applicable in either civil or criminal suits, the nationality of the defendant being the sole determining factor.

AMERICAN CONSULAR OFFICERS IN RELATION TO AMERICAN CLAIMS

American citizens and firms having claims against persons or firms in China may always consult their consuls regarding their claims. In claims against Chinese citizens or firms the treaties provide that the claim be forwarded through the medium of the consulate to the proper Chinese authorities. In the case of American claimants against foreigners in China, consular officers of the United States are frequently able to be of much assistance; but consular officers can not become the attorneys or business agents for the handling of these cases.

In the larger ports, such as Shanghai, Tientsin, Hankow, and Harbin, there are American attorneys who handle legal claims, and in important and complicated cases it is usually advisable that an attorney be engaged, since the consular officers can not act in such a capacity. Lists of these attorneys may always be obtained upon application to the consulate.

China is divided into a number of consular districts, and claims arising in any particular consular district should be taken up with the consulate located in the district. As American consular officers can act only in the interests of bona fide American citizens and firms, application for consular assistance should invariably state the applicant's American nationality. In some instances satisfactory proof of such nationality may be required before the consular officer will undertake to proceed with the claim.

CLAIMS AGAINST CHINESE CITIZENS

When an American has a claim against a Chinese, the claimant should formally address his claim to the consulate of the consular district in which the Chinese is domiciled, setting forth the nature of his claim and the evidence in support of it, together with the statement or proof of the claimant's American citizenship. It is important that the Chinese characters for the names of places and persons be given along with the English text. Upon receipt of a claim so framed, the consular officer, if satisfied of the bona fides of the case, will communicate with the proper Chinese authorities. Often the case is settled without further recourse than an exchange of letters between the consular officers and the Chinese authorities. If not thus settled, the case may come to trial.

The trial is held in the court of the district magistrate having jurisdiction over the defendant. The plaintiff has the right—and usually exercises it—to have a consular assessor present. Appeals from the decision of the magistrate are heard by the commissioner of foreign affairs, with whom consular officers may also sit to observe the proceedings in the interest of the plaintiff.

In certain ports where the number of foreign claims against Chinese are numerous, special courts have been created to try these cases. Since they involve the nationals of two governments, they are often termed mixed courts. A consular representative, usually designated an assessor, almost invariably attends trials in the mixed courts. In Shanghai there exists two highly specialized mixed courts known as the International Mixed Court of Shanghai and the French Mixed Court of Shanghai. The International Mixed Court hears cases arising in the International Settlement in which Chinese and subjects of those powers which do not enjoy extraterritoriality are defendants. The claims of American citizens against Chinese in and about Shanghai are all heard in the International Mixed Court.

To hear cases involving only Chinese and nationals of nonextraterritorial powers, the consular body of Shanghai elects from among the national assessors a number of assessors to sit with the Chinese magistrates. These assessors are known as consular body assessors, and their powers are coequal with those of the magistrate.

When an American citizen or firm desires to file a civil claim or criminal complaint against a Chinese under the jurisdiction of the International Mixed Court, he must first submit his claim or complaint to the American consulate general in triplicate, two copies of which must be in the Chinese language. Petition or complaint is then forwarded by the consulate general to the court, after which it

comes up for trial before a Chinese magistrate and the American assessor, who hand down a joint judgment.

CLAIMS AGAINST FOREIGNERS

Claims against foreigners in China fall into two classes: (1) Against foreigners who enjoy extraterritorial status, and (2) against foreigners who do not enjoy extraterritorial status. The principal powers whose citizens enjoy extraterritorial rights by treaty are United States, Great Britain, France, Italy, Belgium, Spain, Netherlands, Sweden, Norway, Portugal, Peru, Japan, Denmark, Brazil, and Switzerland. In the event of litigation with the nationals of these powers the case will come up in the court of the defendant, and the laws of the defendant's country will govern. This is a point that can not be overemphasized. An American entering into a contract with a citizen of one of these powers may view the transaction from the standpoint of American law, only to find when he undertakes to sue the other party to the contract that a law and judicial procedure totally different must apply. In business transactions of any magnitude entered into by Americans with the nationals of extraterritorial powers, it is highly advisable, therefore, to consult an attorney as to the laws involved.

UNITED STATES COURT FOR CHINA

The United States maintains a special court in Shanghai known as the United States Court for China, which also holds sessions in Hankow, Tientsin, and Canton each year; and it may, if deemed necessary or expedient by the judge of the court, hold session in any of the consular districts. In addition there is a consular court for each American consular district in China—18 in number—with the consular officer in charge as judge. The jurisdiction of the American consular courts is limited to criminal cases in which the penalty does not exceed 60 days' imprisonment or \$100 fine. In civil cases the amount involved must not exceed \$500. Cases involving larger penalties or amounts, and appeals from the decisions of the consular courts, must go before the United States Court for China. Appeals from the decision of the latter may be made to the United States Circuit Court of Appeals of the Ninth Judicial District of San Francisco; and final appeal may be had to the Supreme Court of the United States. Trial by jury is not a part of the present American judicial system in China.

OTHER EXTRATERRITORIAL COURTS

Great Britain maintains a special court at Shanghai known as His Majesty's Supreme Court for China and a court in each British consular district—25 in number—known as a provincial court, with powers not quite so limited as those of the American consular courts. Appeals from the provincial court decisions may be made to the supreme court in Shanghai, and thence to the Privy Council at London.

The other powers enjoying extraterritorial rights in China also maintain a consular-court system—that is to say, each consul is, or may be, a judicial officer authorized to try his nationals.

When an American citizen or firm undertakes to sue a national of an extraterritorial power, he must prepare his petition in accordance with the procedure of the court of the defendant's nationality and file it, together with the required fees, with that court. Such petitions are filed strictly with the court concerned, and not through the American consulate. They must generally be in the language of the court.

INFRINGEMENT OF TRADE-MARKS, PATENTS, AND COPYRIGHTS

With regard to claims growing out of the infringement in China of American-owned trade-marks, patents, and copyrights by nationals of extraterritorial powers, there exists a peculiar situation. Extraterritorial nationals, being subject to the laws of their own countries, can not be prosecuted for the infringement in China of trade-marks owned by another extraterritorial national unless there is some agreement existing between the powers relative thereto. The United States has entered into such agreements with Great Britain, France, Japan, Italy, the Netherlands, Belgium, Sweden, Denmark, Germany, and Russia. These agreements provide, as a requisite for the protection of trade-marks, patents, and copyrights belonging to the nationals of one power by the courts in China of another power, that the marks, patents, and copyrights be registered with the proper departments of the respective governments concerned, and registration in China in accordance with the laws and regulations of China confers no protection in this respect.

If, for instance, an American citizen desires to prosecute a British subject for the infringement of his trade-mark, the mark must first have been duly registered at the British Trade-Mark Bureau in London before the British courts in China can render any protection, even though the mark might be registered in China under the provisional system of registration now in existence. It is highly important, therefore, that the American owners of trade-marks, patents, and copyrights register them in the countries above named if they expect protection in China in respect to infringements by the nationals of these powers.

With regard to the other extraterritorial powers, namely, Norway, Peru, Spain, Portugal, Brazil, and Switzerland, there exists no agreements between them and the United States for the mutual protection in China of the trade-marks, patents, and copyrights of their respective nationals.

With respect to the infringement of trade-marks, patents, and copyrights of treaty-power nationals by nationals of powers who do not enjoy the extraterritorial privilege, an interesting question has arisen in connection with the new Chinese trade-mark law which was promulgated in May, 1923. This law has not been recognized by the extraterritorial powers as applicable to their nationals, but it is operative in so far as Chinese citizens and the nationals of non-extraterritorial powers are concerned. The nationals of the extraterritorial powers continue as formerly to file their trade-marks with the Maritime Customs, which gives protection as against Chinese citizens, but not as against the nationals of nonextraterritorial powers.

TRADE ORGANIZATIONS

CHINESE GUILDS AND CHAMBERS OF COMMERCE

By Commercial Attaché Julian Arnold

A few years ago a Chinese lad was run over and killed in the streets of Peking by a motor car owned by a Chinese. Ordinarily the court would have awarded the deceased lad's family a few hundred dollars' damages and the matter would have been closed. In this case, however, the family happened to be connected with the provincial guild representing citizens of the Province of the family's ancestors, and through the influence of the guild such pressure was brought to bear upon the owner of the car that \$10,000 damages were paid over to the family.

GUILDS

The incident is indicative of the power of the guilds in China. In every city there are guild organizations representing the citizens of other sections of the country, but representing more particularly specific trades and crafts. Some of the guilds are of such strength and wealth that they maintain guildhalls which vie in magnificence with the best of China's temples. Other guilds in more humble circumstances meet in ordinary temples, in shops, or in private establishments.

Though China is now emerging from a civilization analogous in many respects to that of the Middle Ages in Europe, the guild will continue as an institution in China for many decades. The guilds developed through the course of centuries in which the laissez faire policy of government in China left it to the merchants, craftsmen, and people far removed from the power of their clan or family ties to devise ways and means of protecting themselves. The government existed as a thing apart from the people. They were left to manage their own affairs, so long as they contributed the taxes exacted of them. But when the government exactions became heavier than the tradesmen felt they could bear, it was the guild organizations which came to their rescue.

With no definite body of law, no reliable machinery for the execution of such law as existed, and little or no confidence in the administration of government, the guild organizations came to occupy an essential position in the body politic of the country. Under the monarchy no official was allowed to hold office in his native Province; hence, higher officials and the magistrates who presided over the courts were never in intimate touch with local conditions. Even though they wished to adjudicate disputes in a spirit of equity, their ignorance of local practices frequently made it difficult for them to dispense justice in cases that would ordinarily arise between

members of a guild. Guild committees, therefore, especially designated for the purpose, handled most of these cases, and though the parties to the disputes were always privileged to appeal the committees' decisions, it is worthy of note that but few appeals are recorded. The guild, in fact, was inclined to assist its members in appeal cases, but of the appeals noted it is found that the courts more often than otherwise confirmed the findings of the guild committees, whose evidence was admitted by the courts in hearing the cases. It would thus seem apparent that in the great majority of cases the judicial functions of the guild have been satisfactorily discharged.

CLASSES OF GUILDS

Chinese guilds may be divided into two classes: (1) Trade and craft guilds, and (2) the provincial guilds.

Trade and craft guilds.—All important trade and handicrafts have guilds throughout the cities of China where their interests are of sufficient importance to encourage organizations. The lot of the tradesman or of the craftsman who remains outside his guild is an unhappy one. In a society such as the Chinese, where competition is so severe and where means of individual self-protection are so inadequate, few indeed are there who do not find it to their advantage to seek membership and subscribe to the rules of the guild.

There is, generally speaking, no distinction between the trade and craft guilds throughout China. That is, craftsmen or workers often belong to the same guilds as their employers. The purpose of the guild is to protect the monopoly of interest, both for the workers and the proprietors, which the members have in their special line of industry. With handicraft industry, and with individual rather than corporate business, this is possible, but so soon as modern manufacturing with division of labor and corporate capital become general, the guild in this form can not longer endure. Already in Canton, even in cases where domestic handicraft industry still prevails, workers' guilds have been organized as distinct from merchants' guilds. Also, in North China the railway workers in the Government railway have their workers' guilds. For some years, and possibly decades, however, the old type guild will undoubtedly continue to be a force of much consequence in China's economic life.

Sidney D. Gamble's excellent book, "Peking, a Social Survey," describes the guild apprentice system as follows:

The boy who plans to enter manufacturing or selling ordinarily starts his training when he is 14 or 15 years of age. At that time he is bound to a master by a contract, drawn according to the rules of the guild. This contract is usually for a three-year term, though it may be for only a one-year term, as in the Confectionery and Incense and Cosmetic Guilds; or it may be for even 11 years, as it is for the most expert workers in the Jade Guild. The apprentice is required to serve out his full time, or his master will expect to be reimbursed for the money that he has spent for his board and lodging, and in some guilds will collect damages for the breaking of the contract. The apprentices of the Cooks' Guild who do not complete their term must pay for their board and also pay a fine of a least of 10 tables and 300 catties of rice. Such payments are always made, as two men must act as guarantors for the apprentice when this contract is signed.

During the time of his apprenticeship, the boy is entirely under the control of his master. He lives in his store, eats his rice, is subject to his disci-

pline, does any work that is given him, and has a chance to go home only on vacation days or when there is a wedding or funeral in the family. All of the reports telling of the duties of the apprentice state that he is to sweep out the store, make his master's bed, do the cooking and other menial tasks, and then work at his trade.

In return for the services of the apprentice, the master is required by all the guilds to give him his food and lodging, and teach him the trade. Some guilds also require the master to furnish clothes for the apprentice, and still others that, besides clothes, he supply medicine or doctor's services when needed. In Peking there seems to be no limit to the number of apprentices that may enter any guild. An employer is apparently allowed to have all the apprentices for whom he can find work. It has been impossible to find in Peking any trace of regulations, known to exist in other cities, that limit apprenticeship to the sons or relatives of the men already engaged in the trade.

Although there is no limit to the number of apprentices, and the proportion of apprentices and graduate workers varies from guild to guild, most of the guilds have one apprentice to every three or four workers. The extremes are found in the Fur Guild, where the apprentices outnumber the workers 3 to 1, and in the Cotton Dyeing Guild where there are 9 workers to every apprentice. The detailed study of all the stores in a district of Peking showed that there the proportion was 1 apprentice to every 5.8 workers.

Many of the rules for apprentices and some of the philosophy of the Chinese concerning the man who is beginning his business life have been written down and are taught apprentices by constant drill.

When he has finished his term of service, an apprentice is graduated and received as a regular member of the guild. Some guilds require a man to work in his master's shop for a year after his graduation, but ordinarily he is free to work wherever he can find employment. If the apprentice has any real ability, his former master is usually willing to employ him, and so most of the men stay right on in the shop where they have received their training. It is this close relationship between the employers and the employees that makes it possible for both to belong to the same organization without a clash of interests, and this explains how it is that the employers are willing to raise wages even when the workers do not force the increase.

At the time of graduation the apprentices usually give some public recognition and thanks to the master who has trained them. In some cases they simply bow to him before the shrine of the patron saint of the guild, but in others the rules of the guild require that they give a feast to their master and some of the guild members. The rules of the Cooks' Guild require an apprentice to give his master a pair of shoes, a hat, a belt, and a long coat.

Whatever we may think of the apprenticeship system as compared with our western methods of training, it has undoubtedly fitted well with the Chinese life. In the past there has been but little chance for a boy to get an education unless he studied the classics—a long and laborious process. It led to official position if a man kept at it long enough and had the necessary ability, but it was too expensive a process for most. The apprenticeship training gave the boy the education he needed for his trade, made him thoroughly acquainted with hard menial work, and then taught him his trade by constant daily contact. It also made it possible for him to get his training without expense to his family, a very considerable item when so many families have just enough to live on.

For the master it supplied cheap labor for the menial work around the store and house, while for the guild it secured the strength and solidarity of the organization. With a three years' apprenticeship required, there could not be a rapid influx of men in times of prosperity, and the men could not leave in times of depression. Guild traditions and customs were easily maintained, as a boy in constant contact with them for three years would be ready to accept them without question, particularly when he had learned them from his master and teacher. In China the relation between the teacher and pupil is such that what the teacher says is accepted without question, and a pupil is always unwilling to do anything that will go against his teacher.

The development of the national educational system and the increase of new manufacturing methods will end the apprenticeship system in time, particularly as the schools develop methods whereby the boys can get more and better training in industrial lines in a shorter time; but during the transition period many of those with the school training are going to find it hard to make use of their skill because of the conservatism of the guilds.

There is little that is autocratic about the internal administration of the guild. The elections of the officers are generally by popular vote and are frequent, the nominees being men of good standing and generally popular with the members. The ordinary craftsmen or workers in a guild, while eligible to office, seldom hold office, mainly because of lack of influence and education. An instance is cited of one guild whose rules prescribed that 12 of the 28 directors must be workers, the others being either storekeepers or managers. Gamble refers to geographical representation on the board of directors of the Peking Fur Guild in the following:

Its members are almost all natives of Chihli, Shansi, and Shantung Provinces, and it is a rule of the guild that natives of each of these three Provinces constitute not less than one-quarter and not more than one-third of the board. The 48 members of the board are divided into 12 committees, each of which is responsible for the affairs of the guild for one month each year. These committees must include a native of each of the three Provinces, so that every man may be able to get a sympathetic hearing by bringing his case before one of his fellow provincials.

In and about Canton there are upward of a hundred trade guilds, some of which have been in existence for more than 500 years. These are the rice merchants', pawn shops', coffin merchants', drug merchants', poultry merchants', vegetable-oil merchants', silk-piece-goods merchants', timber merchants', and wine merchants' guilds. There are also among the merchant guilds of Canton abacus merchants, secondhand-clothing merchants, actors' clothes tailors, Chinese clothes tailors, pig butchers, ginseng and deerhorn merchants, silk-shawl merchants, oil merchants, restaurant and tea-house proprietors, junk owners, joss-stick merchants, pawnshop brokers, pills and powders merchants, and vermicelli merchants. These guilds make regulations governing prices of their products, working hours, rules for apprenticeship, and matters generally concerning their interests.

When the local authorities become unduly autocratic, to the detriment of the guilds, the latter come forward and protest, often with salutary effects. In cases of excessive or unjust tax impositions against members of the guild, influence is brought to bear by the guild to overcome these impositions.

The principle of arbitration is probably more thoroughly established in China than elsewhere. Reputable Chinese refrain from taking cases into court except as a last resort. However, in Shanghai there is a noted weakening of the legal functions of the guilds due to the position achieved by the Shanghai International Mixed Court in the adjudication of disputes, even among the Chinese mercantile community. In Shanghai also the street associations, which are organizations of Chinese shopkeepers on certain streets, have cut in heavily on the functions of some of the guilds. These associations, of recent development and less conservative in policy, concern themselves in a larger way than do the guilds in civic and political matters. At present they are confined to Shanghai.

The Chinese guilds generally are concerned with defensive and protective functions. They have shown but little disposition to interest themselves in measures for extending or improving civic conditions. They are distinctly individualistic institutions, almost wholly concerned with the immediate welfare of their members.

The guild regulations provide punishment for many offenses. If a member is charged with having sold goods below a rate fixed by the guild and confesses to his guilt, he is punished but not expelled. Competition in China is severe; hence it is difficult for guilds to prevent members from underselling so-called fixed market rates. A common form of punishment is to inscribe the guilty person's name and address on a piece of red paper, along with the nature of the offense and a statement of the fine imposed by the guild. This fine generally takes the nature of a feast to the members of the guild at an appointed time, accompanied by a theatrical entertainment, after which the recalcitrant member is admitted back into the fold. For a second offense the guilty member may be expelled. Similarly, wages are fixed and employers are fined for paying their labor less than the established rate. Piecework wages are, however, common where conditions will permit their application. Hours of work are long and trying. The lot of the apprentice is particularly hard. Most of the guilds maintain fairly elaborate sets of rules, with provision of punishment for infraction, which, however, vary with different guilds and in different places.

In the benevolent sense the guild looks after the welfare of its members. Bonuses are given to store managers and oftentimes to workers at the end of the year. At a member's death the guild donates a coffin, if the family is unable to defray this expense. It also arranges for the sending of the body to the ancestral burying ground if the deceased was away from home or the family poor.

Each guild has its patron saint, and days are set aside for special worship before the special deity or hero of the guild. It appears, however, that the trade and craft guilds of any one city are independent of those in other cities, although the rules, regulations, and administrative practices for the same trades and crafts seem to follow similar lines.

Provincial guilds.—The provincial guilds are more general in character than the trade or craft guilds. These have to do mainly with the interests of individuals of one Province who are domiciled in another. The active members are of the middle or wealthier classes, but the guild is bound to render assistance to needy fellow provincials if they are deserving. One of the strongest provincial guilds in Peking is the Canton guild, which in a sense is the clubhouse of the Cantonese residents. Under the monarchy and before the abolition of the civil-service system natives of Canton who came to Peking to take civil-service examinations were privileged to occupy quarters in the Canton guildhouse. If Cantonese in Peking are involved in litigation, the guild offers its services in settling the difficulty peacefully. It looks after stranded or destitute Cantonese who may be handed over to it by local courts, and arranges, if possible, for their return to their homes. It maintains its own cemetery, where deceased members are temporarily interred until relatives or friends may arrange for the transportation of the bodies to the native district. Periodical sacrifices are offered to the dead on festival days, and religious rites are performed for fellow provincials. Ceremonies are held at stated times honoring the guild's patron saint. The Cantonese guild pays obeisance to Kwan Ti, the god of war, mainly because of his reputed high business qualities.

This guild also assists worthy students domiciled at the capital city and helps in the education of children of Cantonese residents.

The Canton guild in Shanghai was, until 1918, a far more influential and a wealthier institution than its counterpart in other cities in China. It maintains in Shanghai schools for children of Cantonese parents. It retains a paid secretary and staff which function under the board of directors. In 1918 disagreement among its members caused the wealthier and more influential of the Cantonese to withdraw from the guild and form the Cantonese Merchants' Association of Shanghai. The guild still functions, but is far less influential since the organization of the new association. The Cantonese Merchants' Association at Shanghai has a membership of 120 firms and 400 individuals. It has constructed and equipped, at a cost of \$300,000 silver, a modern hospital building on a 3-acre plot of ground, with both modern and old style Chinese physicians in attendance. The hospital has 300 beds and cares for Cantonese patients at nominal charges. This association incorporates in its activities many of the features of a modern club.

Among Chinese resident in the United States the counterpart of the provincial guild is seen in the so-called "six companies," or "tongs," which represent groups of Chinese from different sections of Kwangtung Province, all the permanent Chinese residents in the United States being from the neighborhood of Canton.

The spirit which tends to the perpetuation of this provincialism on the part of the Chinese generally has commendable as well as disadvantageous features. It serves to protect and assist those who otherwise would receive little protection or assistance from any other source. It has, however, the objection that it perpetuates a clan spirit which is the natural outgrowth of the family system in China, which decrees that every man is his brother's keeper, but imposes little responsibility upon him in his relations to the larger unit, the State.

While there is evidence of the scrapping of the guild of the old China in its transition to a new order because of its inadaptability to a modern economic system, yet, in the process of evolution, we shall probably find that the trade and craft guilds will separate, the one incorporating the features of the merchants' associations and the other probably that of the modern trade-unions. It is only to be expected that the guilds will play a prominent and powerful part in the molding of the new China.

Modern transportation and improved communication facilities will lead to a greater intermingling of the peoples of the different sections of the country, with the eventual eradication of provincialities and dialectic differences. These, with a uniform system of schools, a uniform currency, a uniformity of institutions generally, and more effective governmental agencies, together with the development of a code of law and the machinery essential to its equitable administration, will gradually remove the necessities which called into existence the Hui-kuan, or provincial clubhouse, in its present form. However, it is well to bear in mind that, through the agencies of their guilds, the Chinese have acquired capacity for organization and for the settlement of disputes by arbitration, two valuable contributions to their social system.

In whatever capacity a foreigner may have to deal with the Chinese, particularly as regards the relations of the foreign business man and capitalist to the Chinese trader and laborer, he will find that it will be necessary to continue to reckon with the influence and power of the varied Chinese guilds.

CHINESE CHAMBERS OF COMMERCE

The Chinese guilds lacked a coordinate agency. They functioned independently of each other, although a neutral guild was often called upon to settle a dispute between members of different guilds. Thus it was not difficult for the chamber-of-commerce idea to take root in China, for it could fill a gap as a clearing house for the guilds. This was not only true with regard to its position as arbitrator of disputes between members of different guilds, but it also served as a medium through which the guilds could secure unity of action.

The first Chinese chamber to be organized was in Canton, probably owing to the larger contact of Cantonese with westerners and their earlier appreciation of the advantages which such a trade organization might have to offer. The Canton chamber came into being about 40 years ago. It was not, however, until after 1900 that Chinese chambers of commerce became more general. The Manchu dynasty discouraged in every possible way the development of new organizations or associations among the people for fear of their political influence. It was after the founding of the Republic that chambers of commerce spread rapidly over the country, although during the five years leading up to the revolution they had already achieved strong positions in the leading commercial centers.

At the end of the year 1914 there were 1,243 ordinary chambers of commerce and 55 general chambers of commerce among the Chinese mercantile communities. Szechwan Province, in West China, where they number 130, boasts the largest number of ordinary chambers. Shantung ranks next with 93.

The provisions for the organization of chambers of commerce in China were promulgated September 12, 1914, and revised on December 14, 1915. These serve as the organic law under which chambers of commerce function.

Considerable latitude is allowed the mercantile communities in the handling of the details of organization maintenance. Some months ago the Shanghai General Chamber of Commerce became involved in a dispute over the election of a new chairman. The Ministry of Agriculture and Commerce sent its representative to Shanghai and the dispute was settled in accord with the ministry's ruling.

The Shanghai General Chamber of Commerce at the end of 1924 had 518 members, of whom 123 were representatives of guilds. Among the 395 individual members are 26 compradors of foreign firms. There are also 117 "special individual members," who are members in good standing for upward of five years in the Chinese company of the Shanghai Volunteer Corps and who were elected to a sort of honorary membership as a testimonial of the Chinese mercantile community's appreciation of their services. As for the actual governing force, however, the Shanghai chamber is in the main a federation of trade guilds. There are about 150 guilds represented

in the chamber's membership. Some of the larger guilds, such as the Native Bankers' Guild, which represents 120 member banks, pay annual dues as high as 1,000 taels. A designated number of representatives in the chamber is allowed each guild in proportion to its wealth and influence. In some chambers—Canton, for instance—only representatives of guilds are accepted into membership, and in all Chinese chambers the local merchant or trade guilds either completely control the affairs of the chamber or exert a dominating influence.

The Chinese chamber of commerce is an intermediary between the Government and the merchant classes. Its assistance is often solicited by the Government authorities in securing the enforcement of a new law or regulation affecting mercantile interests. A Chinese court will often refer cases to a chamber for its opinion or ask the chamber to arbitrate in disputes between individuals. Information regarding trade practices and customs will be sought by officials in adjusting difficulties with the people, and the chamber's opinion in these matters will carry much weight with both the officials and the people generally. For this purpose the Shanghai chamber maintains a "commercial certification department," which renders service as witness in arbitration courts and gives information to official courts concerning (1) commercial agreements and contracts; (2) actual capital of business firms; (3) firms' trade names; (4) trade-marks. Firms applying for such certification service must pay a minimum fee of \$20 silver per case, graduated upward to a maximum fee of \$100 silver.

One of the very useful functions of the Chinese chamber of commerce is its judicial capacity. Although efforts are being made under the Republic to build up a code of civil law and develop courts competent to administer it, yet for some years established customs and usages will continue to receive recognition. In China the guild and the chamber of commerce serve as the interpreters of the common law of business practices. Before these tribunals the majority of disputes in the Chinese mercantile community are settled. In Shanghai the International Mixed Court has come to occupy such a prominent position in the handling of disputes between Chinese, as well as between foreigners and Chinese, that the judicial functions of both the guild and the Chinese chamber of commerce have been decreasing in importance. This is a situation, however, which is somewhat exceptional for China as a whole. Even in Shanghai the chamber does maintain an arbitration court which transacts a very considerable amount of business. Its court is made up of a president, 26 arbitrators and investigators, 4 clerks, and 1 legal adviser. A fee of not more than 2 per cent of the amount involved is charged on the losing party, but this is equally shared by the disputing parties where both sides show good cause for bringing their case to arbitration. In case of refusal by the disputing parties to abide by its awards, the tribunal may petition the court to enforce the award.

In order to develop uniformity in methods of procedure in the chamber of commerce arbitration courts and to prevent clashes with the regularly constituted legal authorities, the Ministry of Justice, in cooperation with the Ministry of Agriculture and Commerce, drafted a set of regulations for the Arbitration Court of

Commerce as promulgated January 28, 1913, and revised detailed regulations relating to the administration of the Arbitration Court of Commerce were promulgated June 10, 1917.

The failure of the Chinese to have developed, up to this time, a strong central Government militates against strict enforcement of these regulations. Their degree of application varies with various communities. It is anticipated, however, that the regulations will become increasingly effective, as there appears to be no opposition to them and they are generally recognized to be helpful for the purpose for which they were devised.

In consequence of the visit to China in 1910 of the representatives of the Affiliated Chambers of Commerce of the Pacific Coast, the Chinese chambers a few years later organized the Associated Chambers of Commerce of China. At the annual conferences of this association matters of nation-wide importance to the business men of the country are considered, and representations are made upon behalf of the commercial interests of the country generally. There is, however, a noticeable tendency upon the part of this organization to interest itself in politics. The Chinese bankers' associations are probably accomplishing more in a constructive way for the business interests of the country through their annual conferences because of their freedom from petty political influence.

Americans desirous of communicating with the Shanghai, Canton, Hongkong, Tientsin, Hankow, or Peking Chinese chambers of commerce may do so directly and in English. Communications to other Chinese chambers may best be addressed through the American consuls who function for the districts in which these chambers are located. It is necessary in all cases to use the designation Chinese Chamber of Commerce, as there are also chambers of other nationalities in the important commercial centers of China.

FOREIGN CHAMBERS OF COMMERCE

By J. B. Powell, Honorary Secretary American Chamber of Commerce, Shanghai

There is said to be filed away somewhere in the records of the State Department at Washington a letter which was written by an association of American merchants in Canton, between 1806 and 1815, which contained a petition to the President of the United States asking for a more efficient American consular establishment in China.

This letter is of historical interest because it indicates the existence of an organization corresponding to a chamber of commerce, composed of American merchants on the coast of Asia, at a date preceding by many years the establishment of some of the oldest chambers of commerce in the United States, and also because it shows that associations of merchants, even in the early days of American commerce in the Orient, provided an important point of contact whereby the American Government and people were kept in touch with problems affecting the welfare of their commercial and other interests in that part of the world.

According to the Encyclopedia Sinica, the first definite organization of a foreign chamber of commerce in China was that established by British merchants in Canton on August 25, 1834, the

purpose being to "insure unity of action at the time when Lord Napier was trying to force open the door of China." According to the same source of information, a general chamber including all foreign merchants was formed in Canton in November, 1836, but was dissolved in 1839 owing to trouble arising between the foreign merchants and the Chinese over the question of opium importation. A statement published at the time of dissolution is significant: "The chamber dissolves until the restoration of our trade, the liberty of egress from Canton * * * enables the chamber to serve the community in a legitimate manner."

A chamber of commerce was formed in Hongkong on May 29, 1861, composed of some 60 firms, and some insight into its purpose and activity is shown in the statement that "from the beginning it has frequently communicated directly with the (British) minister in Peking, and it rejected the suggestion of a consul some years ago that all communications should be with the colonial government. In 1884 it received the privilege of electing one member to the Hongkong Legislative Council."

Although there doubtless had existed associations of merchants in Shanghai for purposes of mutual protection from the time the port was opened to foreign trade on November 17, 1843, there is no record of a chamber of commerce until 1847, when the Shanghai General Chamber of Commerce was formed. The General Chamber of Commerce, which is still in existence, was international as to membership, and differed from the general idea of a chamber of commerce in the United States in that it was not a "trade promotion" body. The primary interest of the general chamber from its beginning, and even to-day, is the standardization of trade practices, the settlement of misunderstandings, and the correction of trade abuses which may develop between foreign merchants as a body and the Chinese. For example, in the report for the year 1923, we find published a "scale of fees for arbitrators and umpires," a "scale of commissions and brokerages," and a mass of correspondence between the chamber and the Chinese chambers of commerce on matters affecting trade. We also find a general report on political and financial conditions of the Chinese Republic. Among the subjects covered are the problems of cargo pilferage at Chinese ports, congestion on Soochow Creek (an important trade artery connecting Shanghai with the hinterland), cotton and silk testing stations, negotiations with the licensed pilots' association over the subject of fees, standard forms of contract for dealers in raw cotton, a protest against bandit outrages upon foreigners, and so on through the scale of relations between the foreign merchants and the Chinese.

Owing to the fact that the general chamber for a long period of years was the chief organization of consequence among foreign merchants at Shanghai, it came to exercise broad powers and was looked upon by the foreign consular authorities and the Chinese as having almost semiofficial status. In brief, if the general chamber recommended certain action in reference to trade matters it usually was adopted as a matter of course, the foreign consuls recommending the action to their own nationals as well as to the Chinese Government. This situation continued up to the outbreak of the World War.

Although the general chamber at Shanghai was the principal organization dealing with trade matters, it would be incorrect to infer that it was the only organization. On December 16, 1898, there was organized at Shanghai the American Association of China, the membership being open to "citizens of the United States residing in China, Japan, Korea, the Philippine Islands, and elsewhere in Asia," and the purpose of which was to "foster and safeguard the commercial and other interests of the citizens of the United States." British subjects in the Far East had a similar organization in the British China Association, and there doubtless were others. But in view of the fact that membership in these bodies was not strictly confined to persons directly interested in commercial matters, a detailed consideration is not pertinent.

At the beginning of the World War, 1914, the national, as distinct from the international, chamber of commerce came into being in the commercial history of Shanghai. The Americans and British organized their chambers of commerce in 1915, and since then other foreign nationals have established chambers, until we now find listed also in the Shanghai directory Belgians, French, Germans, Italians, Japanese, Dutch, Norwegians, and Russians, organized in chambers of commerce for the purpose of protecting and promoting their national commercial interests in China. The relationship between these national chambers and the general or international chamber has not yet been definitely defined, but the American Chamber of Commerce has adopted the policy that American representation on the committee of the general chamber should be subject to the recommendation of the American chamber. If this procedure is ultimately followed by the other national chambers, the general chamber in time will come to occupy the position of a central clearing house or coordinating body, where the composite viewpoint of the foreign commercial interests may be expressed either to the Chinese Government or to the foreign governmental representatives in China.

Although entirely unofficial, the foreign chambers of commerce in China exercise an important influence upon the relations of the various foreign nations in respect to policies adopted toward China. They accomplish this largely through the adoption and circulation at home of resolutions pertaining to problems in their field, which have the effect of stimulating public opinion and often of encouraging definite diplomatic action, and, upon occasion, even legislation.

In recent years the Americans, British, and some other nationals have formed associations of their chambers of commerce located in the various Chinese ports, such as Canton, Tientsin, Peking, Hankow, Harbin, Hongkong, and elsewhere. These bodies meet annually, discuss problems affecting the commerce of their nationals in the Chinese Republic, and adopt resolutions which are circulated among their nationals in China and to chambers of commerce and Government officials in the respective homelands. At the present time the American chambers of commerce in China, in association with the American Chamber of Commerce in the Philippine Islands and the American Merchants' Association of Tokyo, are considering a plan for the formation of an association of all American chambers of commerce in the Far East.

NATIONAL ORGANIZATIONS

Since Shanghai is the chief commercial port of China, it is of interest to summarize briefly the following information regarding the various national chambers of commerce:

American.—The American Chamber of Commerce was formed in 1915 as a direct outgrowth of the problems affecting the development and maintenance of American trade and commerce on the Pacific Ocean at the opening of the World War. Among its early activities were the advocacy of (1) an American merchant marine on the Pacific; (2) development of American business in China; (3) the passage of an American Federal incorporation law providing uniform corporate regulations for American companies trading in China, in order to place them on an equal footing with competing foreign companies. The chamber also promoted the formation of American chambers of commerce in other Chinese ports, an improvement and increase in the trade promotion activities of the American commercial attaché in China, and better facilities for the exchange of news between America and China. It urged the placing of the United States consular and diplomatic services in China on a better footing, supported a proposal for the American Government to purchase property and erect suitable buildings for the housing of its consular officers in China, and it has continuously actively favored the development of an intelligent and sustained policy on the part of the American Government in respect to China and the Far East.

The Associated American Chambers of Commerce in China was formed on October 23, 1922, when delegates of the American chambers of commerce in Shanghai, Tientsin, Peking, Hankow, and Harbin met in Shanghai. Since that time three annual conferences have been held, which have had the effect of coordinating American commercial and industrial activities in China.

British.—The British Chamber of Commerce was a war product, though for many years prior to the war the desirability of such an institution had been discussed among British firms. It had long been felt that, while in certain respects the interests of the various nationals doing business in China were to a great extent identical, interests distinctively British ought to be looked after by an association distinctively British. This feeling, however, was not strong enough to break through the very cosmopolitan atmosphere of pre-war Shanghai. It was not, in fact, until the eleventh month of the war that it was given expression.

In May, 1915, at a meeting of British piece-goods firms, called primarily to discuss ways and means of preventing trading with the enemy, it was resolved to invite British firms in Shanghai to meet with the object of inaugurating a British chamber of commerce, and at this second meeting the British Chamber of Commerce of Shanghai came into being. In moving the resolution which created it the chairman said:

For years past British firms in China have been compelled to fight their own battles, and it is to their credit that handsome results have been achieved in the face of strong competition from alien combines. Now is our opportunity, gentlemen, to form a combination of our own which will add to our strength, a combination which will work strenuously for the expansion of British trade and which will uphold British prestige.

Belgian.—The Belgian Chamber of Commerce in China was started in January, 1922. Every commercial firm and every financial or industrial concern of Belgian nationality in China took part in the organization, which was definitely concluded in March, 1922. The central committee was established in Shanghai, with branches in Peking, Tientsin, and Hankow. Each of the local committees, being part of the Belgian Chamber of Commerce in China, adheres to the general rules and statutes, but has authority to resolve questions of local interest.

The Belgian Chamber of Commerce does not limit its activity to questions of general interest. Many decisions have been given by the committees or their delegate, acting as arbitrator, in regard to differences between exporters and importers.

French.—The French Chamber of Commerce in China was established in Shanghai at a general meeting of 26 French firms on January 13, 1916. It was originally intended to be a purely local chamber, but as early as March of the same year it was requested by French firms in Tientsin and Hankow to extend its organization throughout China. Its present organization is as follows:

One central committee of nine members in Shanghai, the central committee having full responsibility for all matters of management and direction of the chamber and the exclusive right to speak and write in the name of the chamber; six branch committees in Tientsin (one delegate for Peking, Harbin, Hankow, Hongkong, Canton, and Yunnanfu). Every branch of the chamber enjoys full administrative autonomy and acts as a local chamber for any question of local interest. Where questions of general interest are concerned, the branch committee refers it to the central committee in Shanghai.

The French Chamber of Commerce has been approved and recognized by the French Government as an official corporation by ministerial decree of May 13, 1918. It is associated with the leading economic associations of France and has the privilege of direct correspondence with the Board of Trade of Paris. The French commercial attaché for China is a statutory member.

Japanese.—The Japanese Chamber of Commerce of Shanghai was the outgrowth of the Japanese Business Men's Association of Shanghai, organized in November, 1911. In April, 1919, the name was changed to Japanese Chamber of Commerce. At the present time the organization has 103 individuals and 73 firms as members, of which number 20 constitute the general committee. The chamber publishes weekly and annual reports and, in addition, an extensive monthly and annual statistical report of Japanese commercial activities in China.

German.—The German Chamber of Commerce was founded in March, 1923, at a general meeting of the members of the German Association. The German Association existed in China long before the outbreak of the war.

Any German firm registered with the German consulate general or with predominating German interests may, according to the statutes, become an ordinary member of the chamber. Individuals may, on certain conditions, become extraordinary members. The chamber consists at present of about 50 ordinary members and issues annual reports dealing with German trade in China.

Netherlands.—The Netherlands Chamber of Commerce of China was formed in 1922. It confines itself to questions affecting foreign trade between the Netherlands and the Far East, and among matters considered in recent years are the Chinese trade-mark law, China's import duty, and extension of river police for the protection of foreign shipping. The general purpose is to establish the point of view of Dutch merchants in Central China. The chamber maintains close relations with sister institutions in the Netherlands, and, in matters arising in the Far East affecting manufacturers at home, obtains the views of home interests before adopting resolutions or making specific suggestions.

Norwegian.—The Norwegian Chamber of Commerce for China was founded at Shanghai on November 30, 1920. The chamber's object is to further Norwegian commerce with China, to enable Norwegian exporters and importers to obtain advice and reliable information about business possibilities in China, and to act as arbitrators or to appoint arbitrators in cases of disputes and claims. Eligible to membership are all Norwegian firms in China and at home, and also individuals residing in China. The chamber is registered in Shanghai.

Russian.—The Russian Chamber of Commerce, composed of Russian business men, was organized in Shanghai on April 21, 1917. The main principle of the organization was to unite the Russian commercial firms in the Far East and to promote Russian trade in China. Since its formation the general work of the chamber of commerce has been handicapped because of political conditions in Russia.

Italian.—The Italian Chamber of Commerce of China was organized in 1903, but remained comparatively inactive until the year 1917, when it was reorganized and its jurisdiction was extended over other sections of the Far East. It has now a branch in Tientsin, which has jurisdiction over North China. The total membership of the Italian chamber is 120, and the Italian consul general at Shanghai is ex officio honorary president. The chamber claims the credit of having secured the inauguration of the Italian navigation steamship service, the Lloyd Triestino, with direct communication between Italy and China.

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THE COMPRADOR

By Commercial Attaché Julian Arnold

In their early relations with China foreign traders were obliged to confine their transactions to Chinese hong merchants, who held monopoly rights conferred upon them by the Chinese Government officials. Up to the early decades of the nineteenth century British trade was for the most part in the hands of the East India Company, which held a royal charter.

Morse, in *The International Relations of the Chinese Empire*, says:

The hong merchant was responsible for every act of the foreign trader and his ships; and, to enable him to carry the burden, he alone could buy from the foreigner and sell to him; he provided house accommodation, compradors, and servants, and every act of the foreigner was under his control and supervision. By the Nanking treaty of 1842, "All this monopoly was swept away, and the foreign merchant was now free to buy and sell with whom he pleased, at prices to be settled by mutual agreement; engage without restraint his own compradors and servants, * * * ."

CHANGES IN TRADE METHODS

Up to the beginning of the twentieth century foreign trade with China was in the main concerned with staples of commerce, such as cotton piece goods and yarn, tea, and silk. Since 1900 conditions in China which concern foreign trade have changed very considerably. China has been brought into much closer communication, both intellectually and physically, with the occidental world. Modern industrial developments in China have opened new channels for trade. Improved internal transportation, responding to better oversea shipping facilities, have opened the markets of the world to the products of China. Foreign traders have penetrated into the interior of the country with the opening of many new treaty ports. Many of these foreign traders have familiarized themselves, to some degree at least, with Chinese customs and the language of the Chinese people. On the other hand, during the past few decades many Chinese have gone abroad and have become familiar with western ideas and with the English language. Furthermore, the dissemination of western ideas and learning in China have produced substantial changes in the commodities of commerce and in trading methods.

POSITION OF THE COMPRADOR

In connection with these changes it is only natural that the position of the comprador, the intermediary between the foreign and the Chinese business man, should have evolved into a position of less relative importance than that which it formerly enjoyed. Formerly the comprador guaranteed the obligations with Chinese dealers which were entered into by the foreign firm whom he served. His salary was nominal compared with the aggregate of the commissions allowed

on the business which passed through his hands. He had to be a man of capital, to have a knowledge of business, and to be influential in Chinese mercantile circles. In the days when the teacup and the opium pipe were more potent factors in business than the telephone or the telegraph it was the comprador who at all hours of the day or night entertained Chinese merchants, dealers, and brokers and handled their business transactions involving the exchange of commodities with foreign countries.

In years gone by the word of the Chinese merchant was as good as gold. In a tribute to the character of the Chinese business man the manager of the Hongkong and Shanghai Banking Corporation stated some years ago that he had never known a Chinese defaulter. However, during the past decade or two adventurers from abroad are partially responsible for the introduction of questionable methods involving trading on Chinese credit money advanced through compradors who were often left in the lurch. Furthermore, the increase in the numbers of foreign business men in China stimulated the demand for Chinese compradors, so that some concerns took on men, who, they later found, to their regret, pretended to be more than they actually were.

To the majority of foreign business concerns in China the comprador is still an indispensable factor, and will probably so continue for some time, but in a decreasingly effective way. With no commercial credit rating agency, with a complicated currency, with difficulties in realizing on native securities because of the treaty stipulations whereby foreign business activity is confined to certain treaty ports, and with differences between Chinese and foreign business customs, the importance of the comprador's position in the foreign firm becomes apparent.

It is a noteworthy fact, however, that during the past 10 years many well-established foreign business houses in China have come to depend upon their compradors much less than formerly. In many cases the compradors are no longer obliged to guarantee the full amount of the monetary transactions with Chinese dealers. It is not uncommon now, in contracts with compradors, to specify a 25 per cent limit of responsibility. The functions of the comprador in South China, particularly in Canton, have changed less during the past decade than in Shanghai and North China. In most cases in Canton a comprador still gives a full guaranty against loss, to the extent of his liability under his agreement, although there are instances, even in Canton, where the comprador's guaranty has been cut down to 75 per cent of his contractual liability.

In Canton the Chinese "broker" is becoming an important intermediary between foreign firms and Chinese dealers. He is a free lance, and in export lines, for instance, visits the Chinese merchants daily, secures prices on merchandise, then shops around among the foreign concerns, seeking the best offer which he can secure. In import commodities he makes connections with a number of export houses and goes out among the Chinese merchants to secure sales commitments. In Shanghai and North China the market shroff, who is definitely attached to a certain foreign firm and functions under the compradors, partially performs this service.

The day has passed when the foreign trader can come to China, engage a comprador, intrust him with advances greater in amount than the actual amount of his security, and expect that business will move smoothly with a net profit to the foreign trader concerned and with no obligations on his part to safeguard himself against losses through an intimate knowledge of the situation. In other words, it is necessary for one to know one's comprador and to inform oneself on the details of the transactions intrusted to him. The firms that proceed in this manner are having little or no difficulties with their compradores. They use the same degree of common sense in handling their business in China as they would in handling it in their own home communities.

There is a distinct tendency on the part of many Chinese dealers to purchase directly from manufacturers abroad. This obligates the foreign business house in China to be on the alert in seeking Chinese customers, rather than to intrust the sales entirely to its Chinese staff. This fact influences considerably the functions of the comprador. It places him more in the position of credit man, Chinese adviser, and Chinese assistant than in that of intermediary between the foreign concern and the Chinese dealers. Owing to the clannish spirit of the Chinese, there is a tendency on the part of a comprador to cultivate a clientele among his friends, his fellow clansmen, or fellow provincials. Sometimes he depends too much upon this small circle for his business contacts and thereby limits the activities of the firm which he represents.

The comprador of an ordinary foreign import firm will receive a salary of about 150 taels a month (about \$100 United States gold) and will provide a native bookkeeper and shroff. His contract will allow him a certain commission on all business done, depending on the volume and character of the business. In some cases the comprador hires and is responsible for the native salesmen.

THE BANK COMPRADOR

The position of the bank comprador is different from that of the comprador of an import or export firm. In former days a bank comprador was permitted to offer as security bonds signed by a guarantor for a certain maximum amount, with a cash deposit equal to one-quarter of the bonds. On this cash deposit the bank allowed an interest of 5 to 6 per cent. At present most of the banks require a cash deposit, usually about 100,000 taels. The bank comprador receives a salary of 200 to 500 taels a month, from which he pays his staff. He receives brokerage allowances of 1 to 1½ per cent on sums deposited through the comprador, on the principal of loans issued by the bank and negotiated through the comprador, on the interest on renewed loans, on the purchase and sale of drafts and telegraphic transfers, and on the purchase and sale of dollars and taels; ½ to 1½ per cent on the purchase and sale of drafts and telegraphic transfers in gold currency, and on the purchase and sale of coins and bank notes in the gold currency of various countries. The brokerage to the comprador for special transactions must be fixed before the closing of the transactions. In the issuance of loans to Chinese firms or individuals through the comprador, he

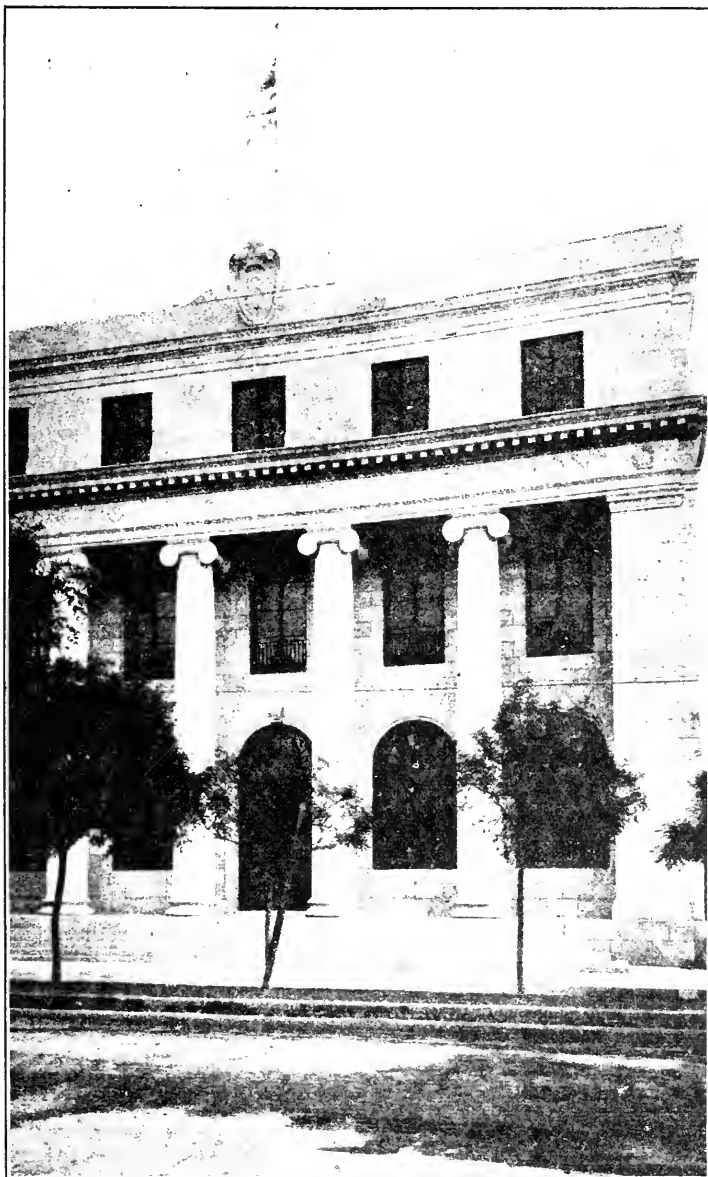


FIG. 13.—International Banking Corporation's building at Peking

must countersign the loan contracts or promissory notes; in buying drafts or telegraphic transfers from native banks, he must guarantee against nonpayment or delays in payment. He usually carries on his staff an assistant comprador, a market reporter, a silver expert, one or two bookkeepers, and several shroffs, through whose hands coins received and paid out must pass in order that counterfeits may be detected and the various silver dollars current in the market handled to the best advantage. He usually employs several money collectors, who count the coin, who are responsible for delivery of the money to customers outside the bank, and who collect money due the bank. He has also a cashier, who, jointly with a foreign cashier, keeps the two or more keys to the bank vault.

AGREEMENT FOR SERVICES

There appears below a sample form of agreement for the services of a comprador, which is representative of the forms used by import and export houses and which enumerates in detail the functions, responsibilities, and remunerations of the comprador. By a perusal of this document the American business man should be better able to gauge the nature of the relations of foreign business men with their compradors than they could do from a mere description of details.

The old-time comprador is becoming an institution of the past. While he is still an indispensable factor to the business of the majority of the foreign firms in China, yet it is inevitable that he will, in the not distant future, give way to Chinese assistants trained under modern methods and placed in positions of responsibility as managers of agencies in the interior, as salesmen, or as credit men, leaving to foreigners only the executive and supervisory positions.

FORM OF AGREEMENT

The following is given as illustrative of the form of agreement used in employing a comprador:

THIS AGREEMENT made and entered into this _____ day of _____, 19____, by and between the _____ (name of company) and _____ (nationality) corporation having offices and transacting business at _____ (name of port) and _____ (name of port) (hereinafter called the "company") party of the first part, and _____ a Chinese citizen of _____ (name of city in China) (hereinafter called the "comprador"), party of the second part,

WITNESSETH: The said company hereby agrees to employ the comprador, and the comprador hereby agrees faithfully and diligently to serve the company as comprador for the period of three (3) years, commencing on the _____ day of _____, and this agreement shall bind the parties hereto and apply to all business transacted from the _____ day of _____,

Salary.—The comprador shall receive a salary of _____ (kind of dollars) dollars -----.

Staff.—The comprador shall engage and pay at his own expense a sufficient Chinese staff to consist of not less than the following: 1 assistant comprador; 1 Chinese accountant; 1 delivery order and invoice shroff; 1 small shroff; 5 special import commodity shroffs; 1 sundry commodities shroff; 2 office coolies, and any other additional Chinese staff as the company may require from time to time without extra charge.

The appointment of each and every member of the Chinese staff shall be subject to approval by the company and the comprador shall dismiss any member or members of the Chinese staff when directed so to do by the company.

The comprador shall be responsible for the honesty and good conduct of each and every member of the Chinese staff and shall indemnify the company against any loss or damage caused by the default or misconduct of any member or members of such Chinese staff.

The comprador further agrees that the said staff and every member thereof shall be amenable and subject at all times to the supervision and management of the company. The comprador further agrees to suitably furnish and equip at his own expense such office room or rooms as shall be assigned to him and his said staff by the company.

Guarantee.—The comprador agrees to deposit with the company at the time of the execution of this agreement, as security for the fulfillment and performance by the comprador of all the terms, covenants, and conditions and obligations of this agreement on his part to be kept, performed, and observed:

(1) Foreign title deeds for property in value not less than ----- thousand taels ----- (name of city in China) sycee, which said title deeds shall after the execution hereof be transferred into the name of the company; (2) ----- (name of Chinese currency) dollars ----- cash to be deposited in such bank as shall be designated by the party of the first part, and to remain there until all obligations under this contract are completed; the regular bank interest on this amount to be paid to the party of the second part. Provided that whenever the guarantee shall, in the opinion of the manager of the company for the time being at ----- (place), China, become insufficient security for the aforesaid sum, the comprador shall within one (1) week after notice thereof furnish other additional satisfactory security to make up such deficiency; and provided further that the amount of such security shall be increased from time to time by the deposit of further title deeds and the transfer of the same into the name of the company, whenever in the opinion of the manager of the company for the time being at ----- (place in China) the volume of the business transacted by the company shall require it.

Commission.—The company agrees to pay the comprador a one per cent (1 per cent) commission upon all import contracts obtained and guaranteed by the comprador in connection with the import business of the company. Said commission shall be computed and figured on the gold f. o. b. cost price of the goods covered by said contracts, exclusive of advances, charges, and commissions.

Said commissions shall be settled every month, as early as the accounts can be presented, and checked and approved by the ----- (name of location in China) office, and are due and payable to the comprador when said goods have been delivered to the local merchants and the company has received payment in full for the same.

Advances.—The comprador shall during the term of this agreement make advances to the company from time to time to the extent of not more than ----- (designation of currency) taels ----- per month, for proper and necessary expenses in connection with the business, upon instructions or written orders duly signed by the manager. Whatever sum or sums shall have been so advanced by the end of each calendar month the same shall be repaid to the comprador by the 10th day of the ensuing month, in default of which the comprador shall not be obliged to advance any further money until such sum or sums so advanced have first been repaid, and even though the agreed amount to be advanced, namely, ----- (designation of currency) taels -----, shall not have then been exhausted. It is agreed that there shall be no interest due or payable on such advances, if paid when due, but if not so paid, then such advances shall draw interest at the rate of seven per cent (7 per cent) from due date until paid.

Books.—The comprador undertakes and agrees to keep just and true accounts of all sums of money passing through his hands in connection with the business of the company and of all matters connected therewith, said accounts to be kept in book form in the English language, which said book or books shall be at all times accessible to the company.

Collections.—The comprador agrees to report within 24 hours of collection all cash, checks, or native orders in his hands belonging to the company and to deliver to the company immediately at its request any sum or sums of money or negotiable papers belonging to the company, and to be prepared to report daily the balance brought forward from collections and all other sources.

Godowns.—The comprador shall have the charge, care, and supervision of the safe and proper storage and keeping of all goods in the godowns of the

company or in godowns or part of godowns hired for the purpose by the company, and while such goods or samples are under his care and custody as aforesaid he shall be responsible for any loss thereof or damage thereto by reason of theft, pilferage, or otherwise, except of fire, flood, riot, or by any reason or cause beyond the control of the comprador. The comprador shall be responsible that goods in his care and custody as aforesaid are delivered from godowns only against delivery orders signed jointly by himself and by the company. The comprador shall inspect the cargoes on arrival at----- (name of port in China) to ascertain whether the packages be in a good and sound condition and shall report to the company immediately if any of such cargoes are being short landed and shall report the discovery of any damage or other defect in the general condition of the packages, so as to enable the company to take such action as may be necessary against insurance companies or others responsible for the loss or damage to recover for said loss or damage.

The company shall be responsible for the payment of storage, insurance, transportation, and other proper charges for the transmission of any goods from steamer to wharf and from wharf to godown or other destination, or vice versa, if for export, and the comprador shall be responsible for the delivery of all cargo to be taken from wharf or godown or other destination after such cargo has been delivered by the wharf authorities to the comprador or to any other person acting in his behalf, and shall be responsible for the delivery on board carrier of all export cargo.

Responsibilities for payment of bills, orders, and checks.—The comprador shall not be responsible for the payment of any bills, native orders, or checks received in the course of business by the company from others, unless before such bills, native orders, or checks are accepted by the company they are first approved and chopped by the comprador with a special chop to be used and kept solely for that purpose.

And in the event that any such bill, native order, or check be due or not paid or dishonored, the parties hereto agree to give each other mutual assistance to enforce payment of such bill, native order, or check, or any claim in connection therewith.

Responsibilities for losses.—In the event delivery of goods sold to local merchants on contracts guaranteed and signed by the comprador shall not be taken within contract time or not at all and said goods can not be resold to other parties at invoice cost, together with expense incident to delivering such goods into godowns in ----- (name of place in China), the comprador undertakes and agrees to be responsible for and to pay the company the total loss or difference between the actual cost at ----- (port in China), as above stated and the amount realized on resale. The company agrees and undertakes in all instances when delivery of goods is not taken as aforesaid to use its best efforts and endeavors to dispose of said goods upon the most advantageous conditions possible, and the comprador agrees to render the company all possible assistance in recovering losses sustained by it on contracts not guaranteed by the comprador.

Responsibilities for export cargo.—The comprador agrees and undertakes to be responsible that all goods intended for export conform to sample submitted and agree with specifications of the seller and are in first-class condition in every respect as regards quality and packing; and in event that the company shall question the quality of goods offered by the comprador from time to time for export the comprador agrees to abide by the decision of such qualified chemist or surveyor as may be selected by the company to examine the same.

In respect to goods purchased for export by the company from or through the comprador, terms as to payment shall in each case be first arranged between the parties. In arranging for payment it is understood and agreed that the company shall pay for cargo when delivered to them according to the terms and conditions under which said cargo was purchased or agreed to be purchased.

Exclusive service.—The comprador undertakes and agrees to devote his entire time to the business of the company.

NOTICE.—It is mutually understood and agreed that this agreement may be terminated by either party by giving sixty (60) days' notice in writing to the other party, provided all claims and accounts between the parties are settled within said sixty (60) days, and provided further that this agreement may be extended or redrawn at any time by mutual agreement of the parties hereto,

and it is further mutually agreed and understood between the parties that upon the termination of this agreement as aforesaid or otherwise, the guarantee hereinbefore mentioned shall remain in full force and effect until all contracts connected with the business of the company and guaranteed by the comprador have been fulfilled and all sums of money due upon said contracts or in connection therewith have been duly paid to the company, but in any case the full amount of the monthly advances made by the comprador shall be repaid by the end of a period of one (1) month.

In witness whereof the parties have hereunto set their hands this----- day of-----, 19-----.

[Signed]

-----,
Oriental Manager.

Witnesses:

CHINESE SOCIAL CUSTOMS AND ETIQUETTE

By Commercial Attaché Julean Arnold

The days when the American or English merchant in China could complacently leave all his Chinese business transactions to the comprador are gone. The commission house which handled everything from garters to locomotives is also a phase that is passing in foreign trade with China. The Chinese buyer wants to deal with the specialist who knows his line, and the tendency to eliminate unnecessary intermediary agencies is becoming more pronounced. Hence, knowledge of the social customs and etiquette of the people is of increasing importance to the American who would be successful in his business with the Chinese. The Chinese knows the American better than the American knows the Chinese. This condition can not be perpetuated to the advantage of American trade in China.

There is no cast in China. The people are very democratic. It can hardly be said that there is an aristocracy, unless it be that of the educated man. In the social scale the official and the scholar stand first, followed by the farmer and the merchant. In modern China, however, the merchant is forging to the front. The soldier, who once occupied a very lowly position in the Chinese social order, is now a factor of some consequence, although the reputation of the military element is not always such as to command respect.

The greater part, probably at least 80 per cent, of China's population is agricultural. The rural population lives in villages, under the patriarchal system. All the members of a family, including several generations, live—figuratively speaking—under one roof. In reality the Chinese household comprises a number of separate buildings, and the larger or the wealthier the family, the greater the number of buildings, though they are in connecting series and are generally surrounded by one wall. The family and not the individual is the unit in Chinese society.

The villages and cities of North China are, for the most part, walled, and the people live within walled compounds. The Chinese village or city has no sidewalks and seldom has suburban residential sections. In the south, and in a large section of the great Yangtze Valley region, where rice is the main crop and where the country abounds in waterways, there are no roads as Americans understand the word. There are paths, only, and with the exception of wheelbarrows—and, in some cities, rickshas—no wheeled vehicles are in use in those regions. However, railways are gradually making their appearance, and a few miles of modern roads permit the use of motor cars.

RESPECT FOR ANCESTORS

Chinese everywhere have great respect for the dead. The graves of the departed are sacred spots. In sections where there are hill lands, the people generally bury their dead on the sides of the hills;

but on the plains, they are interred on the family estates, often in spots planted with clusters of trees. In some respects, the dead appear to receive more attention than the living. Ancestral tablets are kept in the households, and ceremonies are performed before them on days designated for the purpose. Ancestry worship is common throughout China. These ideas are inextricably interwoven with that remarkable institution, the Chinese family.

It is not uncommon for a Chinese to trace his ancestry back a thousand or more years. The seventy-fifth lineal descendant of Confucius lives to-day in Shantung on the Confucian estate, where the great sage was buried during the fifth century before the Christian era. Practically ever Chinese has an ancestral home. For this reason, the remains of Chinese who have died abroad or away from their ancestral homes are sent back to the ancestral burying ground.

SOCIAL CUSTOMS

According to Chinese customs, white is used for the mourners at a funeral, while red, which is symbolic of joy, is the color for the bride. Some modern Chinese respect western conventions for funerals and weddings.

The bride in China is married at the home of the groom and enters his family. An important part of the marriage ceremony is the prostration of the bride and groom before the ancestral tablet of the groom. Marriages or courtships are arranged by the parents and go-betweens, and the sons and daughters are by duty bound to accept these arrangements. Often bride and groom meet for the first time on the wedding day. In making wedding gifts, custom among the Chinese decrees that they be in pairs. Those invited to the wedding feast, who have not given a present to the married couple, often make a gift in money, which goes toward the expenses of the feast. Western marriage customs are in favor among some of the modernized Chinese in some of the larger commercial centers where foreign influence is a factor of consequence.

There is much rejoicing in the Chinese family on the birth of a son. The primary object of marriage is a male heir to carry on the continuity of the family and to worship at the graves and before the tablets of the ancestors. One does not inquire of a Chinese "How many children have you?" but rather, "How many sons have you?" and "How many daughters have you?" While every father must have sons, and sons are encouraged to marry at an early age so as to present their fathers with grandsons, daughters are not slighted in the manner which some westerners seem to imagine, although it is anticipated that they will leave at a marriageable age to join another family. The way to the heart of a Chinese is through consideration for his children.

China is, however, still a country where men take precedence over women. While concubinage is doomed when the Chinese woman will have acquired a position sufficiently powerful to enforce its discontinuance, yet, the concubine has a recognized social position analogous to that of a secondary wife. The children of a concubine are on an equality with those of the wife. They are nominally the children of the wife, who is the mother of the family. A man can not put aside a concubine at will. He must provide for her throughout

life. Hence, it is only the wealthy who can take on concubines, although in South China, as a satisfactory business arrangement, a man will often take on a woman employee in the capacity of a concubine. Few, indeed, are the bachelors and spinsters in Chinese society. There is a very limited social intermingling of the sexes. First and last, woman's place is considered to be the home. According to Chinese etiquette, the man's wife does not appear when he is entertaining his friends. Much of the entertaining, however, is done in restaurants and cafés, where men and women do not sit down together. Generally speaking, respectable Chinese women do not frequent restaurants and cafés. When women go to the old-type Chinese theater, they are seated in a section set aside for them. Even in churches, two sections are usually provided, one for the men and the other for women. In such cities as Shanghai, Tientsin, Peking, and Canton, one may see Chinese men and women intermingling at functions. Beyond the primary schools, boys and girls are educated in separate schools. The idea of coeducation is becoming popular in some sections, but it is not in general favor.

In Shanghai, the New York and Paris of China, many Chinese are adopting western social customs. As Shanghai sets the standard for the rest of the country, it may be expected that western ideas will gain gradually in popularity, modifying certain old Chinese customs. In Peking and Shanghai some of the Chinese women have taken to dancing and to western forms of social entertainment.

AMUSEMENTS

The Chinese are a theater-loving people. Many of them seem to be born actors. Famous Chinese actors command big pay. Contrary to the common impression in America, the usual Chinese play is not a two or three days' performance. It is usually a short sketch, consuming upon the average about half an hour's time, one number following another. There are some historical plays that are put on in serial form and continued over several days, but these are very unusual. The popularity of a Chinese actor depends more upon his voice than upon his acting. This adds to the difficulties of popularizing the Chinese motion-picture play. However, historical plays, with elaborate settings depicting famous historical events, as well as modern-style Chinese plays featured in the movies, are popular with Chinese audiences.

It is because of the great difference between the social customs of the Chinese and western peoples that to the ordinary Chinese audience American photoplays seem curious productions. The animated cartoons, and, in fact, humorous productions generally, are greatly appreciated, as the Chinese possess a marked sense of humor. On the other hand, the sensational photoplay does westerners more damage than good, because of the misconceptions to which such plays give rise in the Chinese mind.

The Chinese are fond of festivities of all sorts. In fact, without the wedding and funeral festivities, the itinerant theatrical troupes, and, last but not least, the New Year celebration, the Chinese village would be a very sordid institution. There is no Sabbath Day in the Chinese calendar. Officially China observes the Gregorian calen-

dar, but unofficially the full moon continues to appear on the 15th day of the month. The whole nation drops its work and closes shop on the Chinese New Year. For 10 days everybody who can possibly do so joins his family and relatives, even at the expense of traveling a long distance, to enjoy the festivities of a real holiday. Prior to the dawn of the New Year every Chinese is supposed to have settled all outstanding accounts. He must at least have made satisfactory arrangements with his creditors for those accounts which can not be settled. The New Year does not, supposedly, dawn until this is done, hence, it is related that there are some whose lights are still burning on New Year morning. They have been a bit tardy in ushering out the old year. The servants in a household receive a half or a full month's extra pay as a New Year's gratuity. Employees are generally given bonuses as New Year's gifts.

DRESS

In South China the men have discarded the use of the queue, which was in reality the emblem of loyalty to the Manchu dynasty. In the central or Yangtze Valley region, the queue is still to be seen among the country people. In the north the queue is more frequently seen, although it is said that in Shansi Province a queue on an adult male is about as scarce as are snakes in Alaska.

Among the men of China foreign shoes and hats are popular, but the number adopting foreign dress is increasing very slowly. The gentleman still clings to his long gown, which is preferably of silk. The Chinese lady wears trousers, preferably of silk, but the skirt is growing in popularity. Customs in dress, among both men and women of the better classes, change with as great frequency as in the West. The women of China wear no millinery, but adorn themselves with jewels and hair ornaments. Foreign-style shoes are gaining in popularity among the Chinese women, but brocades are the preferred material. The binding of girls' feet is gradually dying out. In some sections it is a custom of bygone days, and the next generation will appear with normal feet.

Most Chinese dress for the weather, hence there is not a heavy demand for heating stoves. In the north, where the people are obliged on account of the severe cold to provide heat in addition to heavily padded clothing or furs, charcoal and briquet braziers and oven beds are used, but comparatively few heating stoves. Modern buildings and modern sanitary and heating appliances are gaining favor among the wealthier classes.

ETIQUETTE

The Chinese are a very polite people. The child is taught good manners from the beginning. During the many centuries of Chinese civilization, a certain degree of culture has filtered down through the masses. Even the servant or coolie is able to render thanks in a graceful manner for a gratuity or favor. Fistic encounters are of infrequent occurrence. Disputes are generally settled by peaceful means. The important consideration in the mind of the Chinese involved in a dispute is what is known as "face." Compromise settlements through which the "face" of the parties to the dispute

will be saved are the usual practice. Thus it is essential in dealing with a Chinese that due consideration be given to avoid placing him in a position to lose "face." Also it is well in disputes with Chinese to settle them through the friendly mediation of a third party, if possible, rather than to drag the case into a court.

While the western salutation of a handshake is being received with increasing favor among the Chinese, yet one would do better in calling, to let the advances come from the Chinese themselves, as many are still unfamiliar with this form of greeting and their method of bowing and raising clasped hands to the chin is simple and cordial.

The Chinese reception room usually has a divan at the end farthest from the entrance, with chairs arranged along the sides. For serving tea and light refreshments small tables are interspersed between the chairs. Even if the arrangement is not strictly in this order, more often than otherwise it will be based upon this plan. The seat of honor is that on the left of the divan. (In some sections of the country local customs make for deviations from this rule.) The visitor or guest should not, until after he is pressed by his host and until he is satisfied that others present have not a greater right to this con-

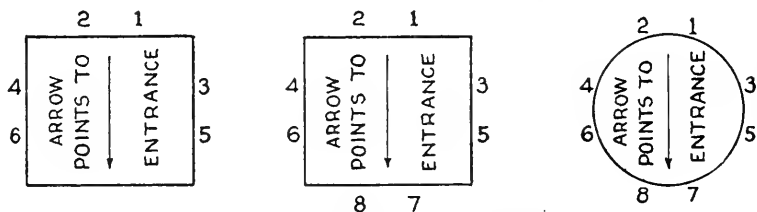


FIG. 14.—Order of seating at a Chinese dinner

sideration than he, accept the invitation to occupy this seat. He should, when he enters the room, act at least as though he is prepared to take the seat farthest removed from the seat of honor, which under his arrangement, is the one nearest the entrance. In awaiting the host, he should never occupy the seat of honor or any in immediate contact with it. When entering a room with a number of guests already assembled, one is expected to bow first to those on the right, then to those on the left, after which one may greet any particular friends or acquaintances individually. In conversation it is not bad form—in fact, it is the usual thing—to inquire as to a man's age, his position, his plans for the future, the price paid by him for this or that. One is always expected to inquire as to a man's sons and parents and their welfare.

The order of seating at a Chinese dinner differs greatly from that in vogue in the West. The order of seats for square and round tables is shown in Figure 14. Round tables are less formal. The seat marked 1 in the plan is the place of honor. That marked 6 in plan No. 1 and 8 in plan No. 2 or No. 3 are the seats for the host. Some Chinese who are familiar with western customs respect the western seating arrangements.

The Chinese feast is a most elaborate affair. The Chinese have been at work for 4,000 years on a menu, and, in the opinion of many,

they are the greatest epicures on the face of the earth. The Chinese cook is an artist and is keen on getting out new dishes. The saving grace of their food is the fact that it is thoroughly cooked. The Chinese host serves his honorable guest with a great variety of dishes, hoping that among these humble dishes the guest may find some which may be to his liking. The feast begins by the host's raising his wine cup to the guests, who are supposed to empty their cups in response. The ricksha coolie or the chauffeur who brings the guest should be given a gratuity while waiting. The guests at a Chinese dinner are supposed to take their leave shortly after the feast is actually concluded; in fact, it is permissible for the guest to excuse himself after indulging in a few courses and leave before the feasting is over.

According to Chinese etiquette, gifts or other objects presented by one person to another are presented and received with both hands. When a Chinese sends a number of articles as a gift to a friend, the recipient is supposed to choose one or two and return the others. He is also expected to give about one-tenth of the value of the gift accepted, in a monetary gratuity to the servant bearing the gift. One should be careful not to be too effusive in admiration of objects of art in the home of a Chinese, as to the mind of the Chinese this savors of a hint that the guest would appreciate being presented with it. It is well politely to refuse offers of presents unless one is convinced that there exists a genuine reason for their presentation.

The foreigner should bear in mind that Chinese are accustomed to taking time to come to decisions, that business is done over the teacup rather than over the telephone, and that friendship plays an important part. The people are kindly, polite, reasonable, good-natured, possessed of a sense of humor, and respond generously to friendly consideration from others.

CHINESE NAMES

One should be careful in speaking of the Chinese to use the appellation "Chinese," and not "Chinamen," "John Chinaman," or "Chinks," all of which are objectionable to these people. Thus one should speak of a "Chinese" and not a "Chinaman." Similarly, Chinese object strongly to the use of the appellation "heathen." To make a distinction of this nature, the appellation "non-Christian" is not objectionable.

Americans intending to conduct business or maintain social intercourse with Chinese should provide themselves with calling cards bearing on one side their names and occupations and addresses in English, and on the other, in Chinese. It is customary to have a three-character name.

Foreigners usually aim to get Chinese characters that resemble in sound the foreign name. For instance, the name "Wilson" may be rendered in Chinese by the three characters "Way-Lec-Son." It must be borne in mind that Chinese custom places the family name first; thus, "George Wilson" in Chinese would appear "Wilson George." Mr. Wu Ting Fang is Mr. Wu, and not Mr. Fang. Chinese often try to assist the foreign to understand the English rendition of their names by hyphenating the given names, thus, "Wu Ting-Fang," or, if placed in English style, "Ting-Fang Wu."

In choosing Chinese names it is preferable to take them from the recognized surnames in China, of which there are about 150. It is well to consult several Chinese, including a scholar, so as to secure names the meaning of which will not tend to subject their bearer to ridicule. It is preferable to have a name that bears a good meaning from a Chinese viewpoint rather than one that attempts to carry the English sound but conveys a ridiculous meaning. Similarly, American business men, in choosing Chinese firm names, should do so with the utmost care and only after consulting those who are able to give good counsel. Merely because a man is Chinese, should not be conclusive evidence that his education and training are such as to entitle him to speak with authority upon delicate shades of meaning of various Chinese characters. Chinese do not usually employ family names in designation of their business. They choose such appellations as the house of "abundant prosperity" or "precious virtue," etc. These shop signs become valuable assets to established business concerns. Any American Government official in China will gladly assist his nationals in securing good counsel for the choosing of Chinese personal or business names.

PERSISTENCE OF TRADITIONS

In spite of the fact that China is now in the midst of an intellectual renaissance and is undergoing a transition—which is probably the most momentous in the several thousands of years of its history—yet customs and practices which are the resultant of centuries-old traditions will not soon disappear. Outwardly many radical changes may take place, but the essence and influence of the old institutions will long persist in coloring the thoughts and actions of the people. That remarkable institution, the Chinese family, which decrees that a man is his brother's keeper, will continue to project that principle for many decades after legal enactment may have decreed otherwise.

An interesting compilation, which throws considerable light on Chinese customs and traditions, is a set of eight beautifully illustrated volumes under the title, "Researches into Chinese Superstitions," by Henri Dori, S. J., translated by M. Kennelly, S. J., Tussewei Printing Press, Shanghai.

KEEPING WELL IN CHINA

Dr. W. W. Peter, Director, Council on Health Education, China

A POINT OF VIEW

This is written primarily for foreigners, particularly newcomers and travelers, rather than for Chinese, but the rules of the road to health are the same for all. That Chinese often observe them in the breach is no reason why you should do so; and their average length of life is probably much shorter than you want yours to be.

Health is a purchasable thing. More of it can be bought by brains than by money. You will see many rich Chinese (and foreigners) die because they used the one and not the other. Use both.

Certain major rules of health apply to everybody everywhere in China. Some of these will be suggested later. Other minor ones depend upon such factors as environment, occupation, individual habits, and geographical location. China is a big country with widely differing health assets and health hazards. Seasons, climate, food, and living conditions are not the same everywhere. Orient yourself and ascertain, for the locality in which you are, just what you are up against.

Only a crank or a fool would attempt, therefore, to enumerate minor health rules in minute detail. There is no such manual of healthy living prescribable to everybody everywhere under all circumstances. One must use discrimination and common sense.

If you want to keep well in China you must acquire one thing which is indispensable—an inquisitive, but not morbidly disposed, mind on health subjects. Learn how the best players where you live play the game. Be constantly on the alert to secure reliable information from those around you on what health-conserving practices are commonly followed by the intelligent healthy who have learned to overcome health hazards. Should you change residence, your health practices may have to be changed also. The health game varies markedly as between north and south; between living in an international settlement and a place 10 miles away; between port cities and the interior. You will have to work out your own health "dope sheet" as you move around.

You could take many things for granted "back home." Better not do too much of that in this land, which has often been stigmatized as "the fountainhead of epidemic diseases." Nose around and get such facts as how your household is run. It will pay to visit your own and your servants' kitchens, latrines, servants' living quarters, and outhouses frequently. Get to know the health habits of your entire household. Occasionally have a qualified doctor check up on these and throw light on any problems which reveal themselves. Then, if you wish to take things for granted, you can do so with your eyes open. Practice vigilance, which is for the larger part just another word for cleanliness.

The sciences of medicine and public health have developed certain safeguards which may be relied upon. Many others are still in the making. The use of the known safeguards demands three things: Intelligence, knowledge, and common sense. By the proper exercise of them all there is no reason, under the ordinary circumstances of living which obtain in China, why you can not live as happily, as effectively, and as long here as you would back home, where professional experts think through many of your health problems for you and hand out the answer in the form of prescribed health laws. In China, unfortunately, health maintenance is still very largely an individual and not a community matter. This means that you will have to keep your eyes and mind open and work a little harder at it. The responsibility is yours. You can not "pass the buck."

So much for this subject of a point of view. I consider it of greater importance for me to have stressed this than to have started right in to enumerate a list of "dos" and "don'ts." Also, if you acquire the right point of view, it will not be a serious matter how many important, definite "rules" I may omit. You will discover them for yourself.

The rest of this article is only for healthy, normal persons who wish to remain such. They are the only kind who should be allowed to come to China to live. If you are sick, go to see a doctor. What follows may explain perhaps how you got that way and how to watch your step next time, but it is not meant to be a consulting room in print.

HEALTH INSPECTION

The time is soon coming when no American will be sent to China permanently who has not passed a standard physical and medical examination. If you did not have one before you came, take it upon yourself to secure a trained worker familiar with the intricacies of the human machine to do this. You owe it to yourself and to those dependent upon you to know your physical assets and liabilities. Do not go blindly along on the mere, but unestablished, hope that your machine is functioning properly. It probably is—but know. This physical and medical examination should be repeated annually. It is a form of health insurance which everyone should carry.

IMMUNIZATION

Be vaccinated against smallpox every three years. Be inoculated against typhoid and paratyphoid fevers every two years. If you have children, do not neglect giving them this protection also. I vaccinated my last baby during a smallpox epidemic at the age of 3 days. I inoculated her against typhoid and paratyphoid at the age of 5 years. You will find that authorities differ on the subject of both age and frequency. Follow your doctor's advice and hold him responsible for results.

It would be interesting to know in terms of dollars just how much the failure on the part of Americans in China to acquire and maintain immunity against these diseases is costing our Government, business concerns, and missionary organizations annually. One of the largest missions in China still reports typhoid fever as standing at the top of the list of diseases causing death and incapacitation.

All this lost money and time, this inefficiency and disruption of plans and hopes in the lives of individuals and families, is quite unnecessary. It is sheer waste.

These diseases are rife in China. They are to be found in almost all parts of the country, for the total absence of quarantine regulations, the system of sewage disposal, and the sources of our food and water supplies all combine to facilitate easy communication of these diseases from the sick to the well. The barriers are all down or do not exist at all. Play safe.

The value of the protection which modern medical science offers you against these diseases is better and more spectacularly established than almost anything else. If you neglect these simple, fundamental, but far-reaching precautions, you may as well ditch all other precautions as well. I am not striking at air. Sickness and death from these preventable causes still occur all too frequently among Americans in China.

I stress this point also because there are not yet available similar preventives against some of the other communicable diseases found in China. The application of the Schick test will indicate those who are susceptible to diphtheria. A small prophylactic dose of toxin-antitoxin will confer immunity, but it lasts for only a very short time. Similarly, there are preventives against cholera and bubonic plague, but these too are short-term insurance and vary. Against certain other major diseases—typhus, pneumonic plague, pneumonia, dysentery, scarlet fever,¹ measles, and others—there is nothing. Also, for some on this list there is no specific treatment. Treatment is palliative and symptomatic: diet and nursing are important, but you either get well or you don't. Therefore, take what established protection you can get and reduce the total possible risks by at least that much. In the organization to which I belong these immunizations are compulsory. Anyone who does not wish to comply for reasons of his own is permitted to take his chances elsewhere.

THE GASTROINTESTINAL TRACT

Into the gastrointestinal tract go all of the solid and liquid raw materials which are used to maintain our bodily machine and produce energy for work. Not counting the luxury of the afternoon-tea habit, three main shipments of raw stock daily are sufficient. Not all of the stock is sterile, nor should it be.

This gastrointestinal trunk line in an adult is about 30 feet long, not counting the numerous branch lines along the way. The line twists and turns, has dilated and contracted points, and the whole of

¹ Regarding scarlet fever, the following statement based upon the latest medical discovery is worthy of consideration:

The streptococcus hemolyticus found in the throats of scarlet-fever patients has been shown by Dochez, Avery, and Bliss to belong to a separate biological group. Drs. Gladys and George Dick have produced scarlet fever in human volunteers with streptococci from the throats of scarlet-fever patients. They have made a toxin from these strains and have shown that the skin of susceptible individuals is injured by it, while the skin of immune individuals is not. They have produced active immunity by suitable doses of the toxin. Dochez and the Dicks have produced antitoxin in the horse. This has been used therapeutically and prophylactically with marked success by Blake and Trask in New Haven. It is known, therefore, that scarlet fever is caused by the absorption of a toxin produced by the growth, in the throat, of a certain type of streptococcus. An antitoxin is produced in the process of immunity. This antitoxic immunity is measured by the skin test with the toxin. Active or passive immunity to the disease can be produced by the injection of toxin or antitoxin.

it is operated in darkness. It is a warm, roomy, well-stocked breeding place for germs or worms, once they get in.

Apart from insects, most of the communicable ailments to which we are subject concern this gastrointestinal tract. We get cholera, typhoid, the various dysenteries, and a marvelous assortment of worms through the mouth. Our intake is bulky and frequent. It passes through many hands before it reaches ours. The organisms and worm eggs are microscopic, and there you are. We have only to eat a sufficient number of these bolshevik organisms to start things going. If our bodily resistance is unable to arrest them, they succeed in blowing up the government. Sometimes it is the doctor and nurse who succeed in pulling us through. Sometimes the undertaker. To avoid this kind of a showdown, certain precautions are in order.

The chief precaution you have to take is simple cleanliness. It sounds simple, but it is not always so easy to execute. Flies, fingers, and filth are three fundamental objects of concern. Without piling in too many details, this means stamping out fly breeding places to the limit. But you can do this only on your own property. Hence it means further proper screening (and this is quite a subject by itself) and swatting. It means washing your hands before you eat and seeing to it that the servants have adequate facilities in soap, hot water, and towels, and that they are used. The hands and finger nails of your servants should be kept as clean as your own. Do not permit them to wear white gloves while serving. They can not wear them while preparing food. It means the application of the point of view I stressed in the beginning.

A lot of nonsense has been written and passed on by word of mouth about the danger of Chinese food. If you have a passably fair digestion you can eat almost any kind of food. Our gastrointestinal system is so marvelously constructed that one of its chief characteristics is its adaptability to handle without ill effects all kinds of raw stock.

The Chinese are unexcelled in preparing delicious foods. In many respects Chinese food surpasses foreign food. But no food is safe if it is not prepared in a cleanly manner, served in clean dishes, by clean servants, and eaten properly. The danger of Chinese food lies right at this point. Chinese cooks never heard of bacteria, or if they did, they probably do not believe in them. Soap costs money and takes time to use. The constant changing of garments; scrubbing of this, that, and the other thing in kitchen and dining room—well, no Chinese cook in good standing believes in it, if left to his own devices. The solution of the difficulty is not to refuse invitations to eat Chinese food, but to confine your intake to the foods which are served hot. Chinese food is as good as foreign food. The risk in either is not the make-up but the manner of preparation, serving, and eating.

Eat plenty of raw fruits. China abounds in fine fruits. First wash it in ordinary water. Safety is acquired by dipping the fruit in boiling water. You will not be safe if the fruit is cracked, blemished, or bruised. Peel after the dipping and not before. Use a clean knife.

The eating of raw salads is attended with risk. There is no known method whereby such vegetables as lettuce can be sterilized and used safely in this manner. Make exceptions only in the case of vegetables which you know are grown in soil not fertilized by human excreta. All ordinary vegetables should be thoroughly cooked.

All raw milk should be boiled or Pasteurized, covered with clean cloth while cooling, and kept cool till used.

Chinese prefer hot tea to cold water, and that for a very good reason. Empirically, if not rationally, they have discovered that somehow raw water is not safe. Drink plenty of water, but have it boiled and stored as carefully as in the case of milk.

The use of native ice is dangerous. Great care should be exercised in the making of ice cream and in the preparation of cold drinks, in order to avoid consuming some of the ice or the ice water.

All left-over foods should be stored in a "safe" made of fine-mesh screen and kept in a cool place. In hot climates food, especially meat and fish, deteriorates rapidly.

Constipation can be generally avoided by cutting down on the meats and increasing the vegetables, especially those with plenty of fiber, like celery, spinach, and native oranges. Some people sit around so much in their offices, clubs, and homes that their abdomens might as well be encased in a plaster cast. At the same time they keep on stoking in the food. Naturally their food line becomes clogged up. Play something requiring vigorous bodily movement. This excludes the phonograph and table games. If you do not know how to play, take exercise. Just walking and walking is bitter medicine to many, but at that it is better than cascara or some other blockade remover. Do not get into the habit of depending upon cathartics. Get a doctor's advice, if necessary, and change your habits of living.

Certain ailments have their origin in a chronically foul mouth and decayed teeth. Your teeth should be kept clean by brushing twice daily and should be cleaned by a dentist twice each year. On these occasions he should examine your teeth for decay and should perform any necessary repairs. Most dentists need no urging to do this. Your grinding outfit requires this care, for upon it falls the task of giving the first treatment to the raw stock which you take in daily. By proper attention you avoid the much advertised halitosis (bad breath), as well as rheumatism and other ailments, to say nothing of preventing or postponing your having to sit for one or two artificial plates.

FLUSHING

Sweat. Produce it from within. Work up a sweat or two every week even in the winter time. In summer in many parts of China nature will give you generous assistance, but even in hot weather work your bones and muscles up to the point where you really sweat. What method you use to secure this is largely immaterial. Do not let your body become soft, flabby, and nothing more than a self-propelling vehicle to carry around your head.

Over 80 per cent of the body is made up of water. Each cell is surrounded by it. Each cell eats, works, and produces wastes. If the wastes are not removed the cell and its neighbors and the whole body become unfit for their maximum output. The tang is taken

out of living. Work remains work and is no longer a great game. The processes by which you sweat flush out the body. The circulation increases. Stored-up food is rushed to the working parts, and the toxic wastes are flushed away through skin, bowels, kidneys, and lungs. The idea back of a cold shower followed by a brisk rub is not only cleanliness but flushing the inside of the body. Play and exercise are physiological requirements unless you wish to go prematurely stale. Hence mere sweat resulting from hot weather is not sufficient. That is a thermal arrangement whereby the body is kept at a normal temperature by evaporation on the surface.

CLOTHING

By observing local practices you will be able to make a selection suitable to your own comfort. I have no opinion as to the relative merits of wool, cotton, or silk. Some people, especially from continental countries, will try to persuade you to lay in a stock of so-called "cholera belts." In my opinion, these wool contraptions are an awkward, irritating, worthless abomination.

INSECT BITES

The bites of certain insects may be dangerous. Their great number and small size constitute their defense and our danger. Unless infected from biting a previously infected person, their bites are harmless, but as to this, one can never tell. Malaria in its several forms, and dengue ("bone-break fever") are transmitted by the mosquito; typhus fever through lice; bubonic plague by the rat flea; "three-day fever" by the sand fly; and tuberculosis, intestinal diseases, and perhaps others, by the ever-present, common house fly.

PROTECTION FROM SUN

Wear a pith hat in summer to protect the temples and the back of the neck. The hat should have apertures for ventilating the top of the head. The use of colored glasses decreases eyestrain. If you wear lenses, have a pair of colored glasses ground to your refraction. The difference in sunlight in China is probably chemical rather than thermal.

MENTAL ATTITUDE

Your mental attitude will influence your physical health. If the Chinese people were like your people in every respect and in all their ways of doing things you probably would have stayed at home.

Cultivate tolerance and patience. Learn to laugh. It requires some thirty different muscles to produce a good laugh, but it is easy once you know how. You will find enough in the course of time in your surroundings and your work to make you weep. Do that, too, if you must, but then laugh. Learn from the Chinese. Even the poor, oppressed, ignorant, hardworking coolie has an enviable sense of humor and can smile. Avoid imitating such foreigners as you may see stalking about China, each like Atlas with a world on his shoulder, growling at the slightest pretext and dissatisfied with everything generally. You are a guest here, and every

decent guest should be easy to please. For purely health reasons it might be well for all Americans to come up annually for an examination in humor. All those found to have lost this gift should be returned home on the next ship at half pay.

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PART II

CANTON CONSULAR DISTRICT

By Consul M. M. Hamilton and Trade Commissioner Osborn S. Watson

LOCATION AND AREA

The Canton consular district extends from 18° to 26° north latitude, thus corresponding in latitude to the area between the island of Jamaica on the south and the city of New Orleans on the north. Its area is 160,000 square miles, comprising the entire Province of Kwangsi and the portion of Kwangtung Province west of longitude 115°. The average annual rainfall is 80 inches, the average minimum temperature 35° F., and the average maximum temperature 95° F. There are two seasons—the rainy season, from April to July, and the dry season, from August to March.

POPULATION

The population of the district is estimated by the Chinese Maritime Customs at 30,000,000, without reference to territory included in the Swatow consular district. The average density of population for the whole consular district is 187.5 per square mile, for Kwangtung Province 265 per square mile, and for Kwangsi Province 104 per square mile.

CITIES

Important cities of the district are:

Cities or districts	Population (estimated)	Euro- peans	Ameri- cans	American business firms
Kwangtung Province:				
Canton ¹	900,000	988	790	25
Kongmoon ¹	77,000	20	15	2
Samsui ¹	7,400	8	3	0
Kiungchow ¹	59,000	30	13	1
Pakhoi ¹	35,000	14	.....	0
Heungshan (district).....	1,145,000	.....	13	0
Namhoi (district).....	1,988,000	.....	1	0
Sunwui (district).....	1,230,000	.....	.....	0
Taileung (district).....	1,039,000	.....	.....	0
Kwangsi Province:				
Wuchow ¹	50,000	26	25	1
Nanning ¹	67,400	8	17	1
Lungchow ¹	20,000	10	.....	.....
Kweilin (district).....	526,000	10	21	0
Liuchow (district).....	373,000	.....	.....	0

¹ Treaty ports where foreigners are entitled to reside for trade purposes.

Canton is the chief assembling and distributing port for both imports and exports. The main channel of the West River, over which moves practically all trade between Kwangsi Province and the outside world, does not enter Canton directly but runs in a

general southeasterly course from Kwangsi to the ocean. Consequently, a certain trade exists between West River ports and Hongkong wherein Canton plays no part. However, Canton remains an outstanding factor in the trade of southern China. The chief place of foreign residence and trade at Canton is the island of Shameen, which was taken over by the British and French in 1859. On it are located most of the foreign banks, residences of foreigners, consulates, and commission houses.

Kongmoon, on the West River, taps the populous Sunning district in the southeastern part of Kwangtung Province. There is a large junk trade and daily steam communication between Hongkong and Kongmoon. Trading with the interior is facilitated by a branch of the Sunning Railway that runs into Kongmoon.

Samsui, some 30 miles west of Canton, near the junction of the West and North Rivers, is an important port of call for West River vessels and is connected by train with Canton.

Kiungchow is on the island of Hainan, for which Hoihow serves as a seaport. The two cities are only 3 miles apart. The commercial possibilities of Hainan are reported to be large, but are practically undeveloped.

Pakhoi, a port in the southern end of Kwangtung Province, serves as a distributing center for the important cities of Limchow and Chinchow.

Wuchow, in Kwangsi Province, is a natural distributing center for the trade between eastern Yunnan, Kweichow, and Kwangsi, on the one hand, and Canton and Hongkong on the other. Ocean-going vessels ply between Wuchow, Hongkong, and Canton.

Nanning, in southern central Kwangsi, was opened to foreign trade in 1907. Of recent years the development of the city has been retarded by unsettled conditions.

AGRICULTURE

The following table indicates the principal products of the district:

Products (in order of importance)	Planting season	Harvesting season	Average production per acre	Estimated annual production	Use or disposition
1. Silk.....	Throughout year; 7 crops.	Throughout year.	Pounds ⁽¹⁾	6,000,000 pounds.....	Available for export trade.
2. Rice.....	March and August; 2 crops.	July and December.	1,800	No data.....	Local consumption.
3. Sugar cane	April.....	November.....	810,000	do.....	Do.
4. Matting straw.	November.....	July-August.....	12,000	do.....	Manufacture of matting and rugs for export abroad and for local use.
5. Cassia....	Throughout year.	May.....	.....	16,000,000-20,000,000 pounds available for export.	Export trade.
6. Tobacco...	January-February	July-August.....	1,400	50,000,000-60,000,000 pounds.	Mainly for export.
7. Tea.....	Throughout year.	June-July.....	(¹)	1,000,000-3,000,000 pounds exported.	Local use and export.
8. Ginger.....	do.....	August.....	(¹)	10,000,000 pounds exported.	Export trade.
9. Fruits.....	do.....	Throughout year.	(²)	No data.....	Local consumption.

¹ No data.

² Varies.

Silk is the premier export of South China and constitutes in value from 87 to 92 per cent of the total exports of Canton to the United States. The production of rice is insufficient for local demands. In recent years tobacco has come to the foreground among the exports, while tea has fallen off. Hongkong handles a considerable share of the trade in cassia and ginger, although both are produced in the Canton district.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The figures given below with respect to manufacturing industries are estimates made by representative business men; no responsibility is assumed for their reliability.

Industries (in order of importance)	Capacity	Approximate number of employees	Approximate capital in industry	Estimated output	Disposition
			<i>United States currency</i>		
1. Silk filatures.....	8,000,000 pounds.....	500,000	\$14,000,000	6,500,000 pounds	Exported. Local use.
2. Boat building.....	No data.....	10,000	150,000	Junks, 3 per month; sampans, 75 per month; motor boats, 6-8 per month.	
3. Native piece goods.....					Do.
4. Knitting and weaving factories (hosiery)	200 power machines.	1,000	400,000	8,000 dozen per day.	Local use and export to Chinese communities abroad.
5. Marine engines.....	20-30 per month.....	2,000	300,000	20 per month.....	Local use.
6. Match factories.....	2,000,000 small boxes per day.	4,000	1,500,000	2,000,000 small boxes per day.	Do.
7. Rubber-sole factories.....	10,000 pairs per day..	1,750	625,000	10,000 pairs per day.	Do.
8. Cement works.....	187,500 pounds per day.	(1)	(1)	(1).....	Do.
9. Tanneries.....	500 pieces per day....	2,000	500,000	1,500 per day.....	Local use and export.
10. Copper mills.....	10,000 pounds.....		1,000,000	10,000 pounds per day.	Local use.
11. Soda-water factories.....	11,000 dozen per day.	350	100,000	1,000,000 dozen per year.	Do.
12. Brick kilns.....	100,000 per day.....	1,000	450,000	100,000 per day....	Canton and Hongkong consumption.
13. Ice-making plants	50.25 short tons per 24 hours.	20	250,000	32 short tons per 24 hours.	Local use.
14. Rice mills.....	700,000 pounds per day.	1,000	1,000,000	650,000 pounds per day.	Do.
15. Mint.....	1,700,000 silver 20-cent pieces per day.	1,000	750,000	750,000 silver 20-cent pieces per day.	Local use and exports to China ports.

¹ Closed.

HOME INDUSTRIES

The above are industries that have shown a tendency to modernize their methods and equipment. No mention has been made of the decentralized native industries which are carried on by hand in the homes of the workers. Among such industries are those for which Canton has long been noted—the carving of jade and ivory; the mother-of-pearl industry; the manufacture of brass ware, silverware, rattan ware, blackwood ware, fans (palm leaf and other), embroideries, leather goods. The painting of porcelains and china-

ware is another important activity at Canton, as is the turning out of native shoes and clothing. The preparation and exportation of essential and other oils from the district calls for special mention. Among the oils which are found in the district are the following: Bean, groundnut, sesamum seed, tea, aniseed, camphor, cardamon, cassia leaf, cinnamon, clove, ginger, gum benjamin, lucraban seed, peppermint, rose, sandalwood, and wood.

MANUFACTURE OF MATCHES

Canton has made commendable efforts to supply its own matches during the last few years. Not long ago there was a large importation of foreign manufactured matches, chiefly of Japanese origin. With the establishment of match factories at Canton, foreign importations naturally fell off and the city became a center from which matches were shipped to the interior districts and to other parts of China.

Practically all of the machinery used in the match-making industry has been imported from Japan, but one factory, the largest in the district, is equipped with American machinery. Chemicals and other materials utilized in the industry are supplied chiefly by Japan, although there have been several shipments of wood from the United States.

RUBBER-SOLE FACTORIES

Another innovation in Canton has been the development of rubber-sole factories. Shoes with rubber soles have long been popular among the Cantonese, and many of the shoes were turned out locally by hand labor, the soles being imported from Singapore. The present trend of the industry is to import the rubber in bulk and to manufacture the soles at Canton. About 20 small factories have sprung up. Simple types of machinery are used, supplied by Japan, Germany, and Great Britain. New installations contain some Canton-made machinery.

TANNERIES

Of the 45 tanneries in the district, 15 are in Canton. With one exception, these tanneries turn out their products by crude, hand methods. All the old-style tanneries had a bad year during 1923, due in part to general business stagnation and in part to the inability of such factories to compete with the machine-made product. However, a Chinese concern equipped entirely with American machinery reported an average monthly net profit of \$600 United States currency. This company imports all its chemicals from the United States. A new plant was in process of erection during 1923 and was ready for occupancy by the middle of 1924.

COPPER MILLS

Fifteen copper mills operate within the Canton district, all of which are owned and managed by Chinese. The only mill which uses machinery has a reported capital of \$100,000 United States currency, while the average capital of the more primitive mills is estimated at \$75,000 each. The raw materials consist largely of scrap copper, ob-

tained at Canton and from importations originating in Yunnan Province. The native method of manufacturing is to employ a bamboo mold and subject the copper to hammering by hand. It sometimes requires more than 10 days to finish one sheet.

BRICK KILNS

Of the 200 brick kilns in the Canton district, only one is modern—reported to be the only one of its kind in China. The plant is equipped with machines of German make, and is now producing 60,000 bricks per day. The bricks find a ready market and the factory operated on a profitable basis during 1923, the gross sales amounting to about \$240,000 United States currency.

CEMENT PLANT

The cement plant at Canton is owned by the provincial government and was not in operation in 1922. Its operation in the latter part of 1923 was spasmodic and uncertain. Because of constant changes in the administrative staff of the plant, no definite and reliable information as to its output has been ascertainable. Cement is turned out at present in cloth bags, with a net weight of 250 pounds, and sells for \$2 United States currency per bag. The output is reported to be of inferior grade, unsuitable for reinforcing purposes and used only for brick mortar and mass foundation work.

MARINE ENGINES

During the World War the building of marine engines assumed considerable proportions at Canton. Unsettled conditions in the Canton delta harmed the industry in 1923 and little activity was apparent. A few steam, oil, and gasoline engines were turned out, the former finding the biggest demand. Until the middle of 1923 the Chinese-made engine undersold any imported engines on the market. As first price is the prime consideration in most purchases, higher costs of operation and the comparatively rapid deterioration of the Chinese engine did not seriously hinder sales. But about July 1, 1923, German engines appeared on the market at a retail price of approximately \$70 United States currency per horsepower. They competed favorably with the Canton makes on the basis of price as well as quality, and hence the building of marine engines at Canton declined during 1923.

ICE-MAKING PLANTS

There are two ice-making plants in Canton. The oldest, a Chinese concern, has a paid-in capitalization of about \$50,000 United States currency. Both refrigerating-plant and power engines were imported from the United States. The other plant is a British concern with a paid-in capital of about \$200,000 United States currency. This plant is also equipped with American machinery.

The knitting and weaving industry is just beginning at Canton. The output is reported to be of fairly good quality and enjoys a favorable market. Daily production of the hosiery factories is estimated at 8,700 dozen pairs, 97 per cent being of cotton and 3 per

cent silk. The majority of the factories are equipped with Chinese-made hand machines, but power machines from America and hand machines from England and Japan are increasingly popular. The cheaper cottons used come from Japan, while the better qualities are imported from the United States and England.

MINERALS AND MINING

The following table indicates the character of the mineral resources in the Canton consular district:

Minerals	Nature of ore	Annual production	Extent of resources	Export in 1923
1. Tungsten.....	Wolframite.....	No data.....	Unknown; a great number of small pockets.....	<i>Pounds</i> 3, 120, 047
	(Anthracite.....)		Estimated at 200,000 tons.....	None.
2. Coal.....	Bituminous.....	100,000 tons.....	Estimated at 600,000 tons.....	None.
	Lignite.....		Unknown.....	None.
3. Gold.....		Negligible.....	No data.....	None.
4. Silver.....		do.....	do.....	None.
5. Antimony.....	Stibnite, valentinite.....	Variable, no data.....	Unknown; many small deposits.....	77, 805
6. Tin.....	Alluvial cassiterite.....	Maximum of 400 tons pig tin.....	Unknown, but extensive and important.....	21, 945
7. Lead.....		Negligible.....	No data.....	None.
8. Copper.....		do.....	do.....	None.
9. Manganese.....	Braunite, pyrolusite, psilomelane.....	Estimated at 5,000 tons.....	Unknown, but important.....	None.
10. Molybdenum.....	Molybdenite.....	Small.....	No data.....	133
11. Bismuth.....	Bismite; a little native bismuth hand sorted and washed to 50 per cent.....	No data.....	Unknown; occurs with ores of tin and tungsten.....	26, 999
12. Iron.....	Hematite.....	Negligible.....	No data.....	None.

Most of the tungsten exported from the Canton consular district comes from Kiangsi Province, where the best deposits are found. Coal is found in both Kwangtung and Kwangsi. In Kwangtung mines are located southeast of Lotingchow, northeast of Yeungkong, southwest and northeast of Shiuchow, and north of Shiuhing. The best coal is from the vicinity of Shiuchow on the North River. Kwangtung coal may be classed as semianthracite. In Kwangsi Province coal-producing regions are reported southeast of Chenan, northwest of Pinglo, in the Holsien district, and on the Kwangtung-Kwangsi border. Kwangsi appears to contain large reserves of high-grade bituminous coking coal.

Small deposits of gold are reported near Kweih sien in Kwangsi Province. A mine has been operated in the vicinity of Chaoyang, Kwangtung Province, while some gold is washed from the sand of the Linchow River. A little alluvial gold mining is done in the Pakhoi district, and scattered deposits are stated to exist in the Haikun district.

Of silver the only known deposits in the consular district are in the Province of Kwangsi. The Kweih sien neighborhood contains the chief veins. An antimony zone has been revealed by geological surveys as extending from the Chukiang district of northern Kwangtung through the Province of Kwangsi to the Wenshan and Ami districts of eastern Yunnan. Antimony is obtained in the stibnite form from the districts of Fengyi and Penchow in Kwangsi. While

there are some small smelting plants in Kwangtung, they are not large enough to be of much commercial importance. Deposits are found along the southern border of the Province and in the district north of Shiuchow.

Tin is said to exist in the Province of Kwangtung at Waichow and in the Taan district of Hainan Island. Tin has been mined for many years in the Fuchwan and Hohsien districts of Kwangsi. Small deposits of lead are reported to exist near Kweih sien in Kwangsi, and other small deposits occur in the Kwangtung districts of Koyao and Sunon. The chief copper region in Kwangsi is near Kweih sien, though additional deposits are said to occur in Hainan Island. The most important manganese mines are in the Pakhoi, Chingchow, and Fangcheng districts of Kwangtung. Deposits are also found in Kwangsi.

Molybdenum is found in both Kwangtung and Kwangsi. Some discoveries have been reported along the coast of Kwangtung, but there has been no active mining. The sulphide form was formerly mined in the Tungyuen district of Kwangtung, but the work is now abandoned.

Bismuth is widely scattered throughout the district, being generally found with tungsten.

Kwangtung is reported to be rich in iron deposits, but its resources have not been developed to any extent. The richest deposits occur north of Waichow on the East River, hematite being the principal ore. Deposits occur also near Shiuhing. Some iron ore is produced and smelted in the Sunwui district and in the coast region farther south, the Pakhoi region containing some ore.

The mines which are in operation in the Canton consular district employ primitive, native methods. The output is largely for local consumption. The most serious obstacles in the way of rapid development of the mining possibilities of the district are the lack of adequate transportation facilities, the imposition of various taxes at the producing centers and along the transportation routes, and the absence of sufficient capital to install modern equipment.

The table below gives data concerning the principal mines, which are grouped here according to products:

Names of mines	Mineral	Capital paid up	Nationality of company	Head office
Tung Fong Siao Ta Tze Kow Gold Mining Co. (Ltd.). ¹	Gold.....	U. S. currency \$20,000	Chinese.....	Siao Ta Tze Kow, Chaoyang, Kwangtung.
Mo Fung Shan Gold Mining Co.	.....do.....	No data.	.....do.....	Fengshing district, Kwangtung.
Sancha Mountain Silver mines. ²	Silver.....	No data.	.....do.....	Near Kweih sien, Kwangsi.
Tienping Mountain silver mines. ³	.....do.....	1,600,000	.....do.....	Do.
Pao-hua Co.	Antimony.....	No data.	Chinese.....	Mengtsz, Yunnan.
Yueching Co.	Manganese.....	No data.	.....do.....	Chingchow district.
Hoyeh Co.	.....do.....	No data.	.....do.....	No data.
Yu Yam Manganese Mining Co.	.....do.....	No data.	.....do.....	Fangchow district, Kwangtung.

¹ Established 1904; capital, 40,000 taels.

² Worked during past 20 years by several Chinese companies. Some modern machinery installed. Reported to be operated at a loss.

³ No working reports available. Surface mining carried on by Chinese syndicate. Survey shows existence of 20 veins of silver.

LABOR CONDITIONS

Wages have been increasing steadily during the last few years, and there has been a growing tendency on the part of the laborers to use the strike to gain advances. Local labor, under proper training and supervision, is able to turn out good work. Indeed, in certain specialized hand labor calling for patience and infinite attention to detail, the Cantonese workman has no superior.

The following table summarizes certain aspects of labor conditions in the Canton district:

Industry	Wages (in U. S. currency)	Board and lodging considerations	Hours of work	Estimated capacity per person
Stocking and sock knitters.	Female; \$0.55 per dozen pair.	Lodging supplied without meals.	8 a. m. to 10 p. m.	1½-2 dozen pairs per day.
Weavers.....	Female; \$0.04-\$0.06 per 10 Chinese feet of cloth.	do.....	9 a. m. to 6 p. m.	50 Chinese feet per day.
Painters.....	Male; \$0.50-\$0.70 per day.	Lodging and meals supplied.	10 a. m. to 6 p. m.	250 cubic feet per day.
Towel knitters.....	Female; \$0.18 per dozen.	Lodging supplied without meals.	9 a. m. to 6 p. m.	2 dozen per day.
Tobacco "godown" coolies.	Male; \$6-\$8 per month.	Lodging and meals supplied.	8 a. m. to 6 p. m.	do.....
Tobacco "godown" sorters.	Female; \$0.30 per picul (133½ pounds).	do.....	do.....	1½ piculs per day.
Tobacco-packing coolies.	Male; \$0.40 per picul	Packing materials supplied by packers.	9 a. m. to 6 p. m.	do.....
China ware porters.	Male; \$0.20-\$0.50 per day.	Lodging and meals supplied.	Varies.....	do.....
China ware decorators.	Male and female; \$0.50-\$0.75 per day.	do.....	9 a. m. to 6 p. m.	do.....
Wharf coolies.....	Male and female; \$0.25 per day.	Meals supplied.....	8 hours per day.	do.....
Matting weavers.....	Male and female; \$0.50 per day.	do.....	do.....	22 square yards per day.
Waste-silk selectors	Female; \$0.15-\$0.20 per day.	Meals and lodging not supplied.	9 a. m. to 5 p. m.	30-35 pounds per day.
General coolie labor	Male and female; \$0.25-\$0.35 per day.	do.....	8 hours per day.	do.....
Mechanics and skilled workmen.	Male; \$0.50-\$1 per day.	do.....	10 hours per day.	do.....
Embroidery workers. ¹	Female; \$0.15 per day.	Lodging and meals supplied.	do.....	do.....
Silk filatures.....	Female; \$0.30-\$0.75 per day, depending on degree of skill.	Lodging and meals not supplied.	11 hours per day.	¾-1½ pounds per day, depending on size of silk.

¹ Many embroidery workers are employed by the piece, performing the work in their homes. The pay varies according to the design.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The following table gives certain significant facts regarding the principal waterways in the Canton consular district:

Name of waterway	Distance navigable—		
	For 15-foot-draft steamers	For 6-foot-draft steamers	For motor launches
West River.....	230 miles in flood season	230 miles in low water.....	700 miles.
North River (above Sanshui).....	60 miles during 2 months of year.	60 miles during 7 months of year.	93 miles.
East River (above Whampoa).....	do.....	68 miles during 2½ months of year.	124 miles.
Kwai or Fu River.....	do.....	do.....	200 miles.
Pearl River and West River.....	87 miles	do.....	do.....

As a result of unsettled conditions, there is little traffic by rail between Canton and Hongkong. Junk service has lessened also. Consequently the river steamers operating between the two ports carry the bulk of the trade. Freight rates between Hongkong and Canton are specific ones, varying with different commodities. The rate on silk shipped from Canton to Hongkong is about \$0.80 United States currency per bale of 106 $\frac{2}{3}$ pounds; on human hair, \$0.34 per case; on wolfram, \$0.12 per 133 $\frac{1}{3}$ pounds (1 picul); and on general cargo, \$0.80 per ton of 40 cubic feet net. Representative import rates are as follows: Cement, \$0.24 United States currency per cask; cigarettes, \$0.70 per case; coal, \$1.30 per ton; cotton yarn, \$0.37 per



FIG. 15.—Pearl River Harbor at Canton

bale; flour, \$3.80 per 100 sacks, with a 20 per cent rebate; paper, \$0.29 per bale; piece goods, \$0.95 per package.

The round-trip fare for first-class passengers is about \$6.50 United States currency; one-way tickets cost about \$3.50.

Most of the trade in the district is carried by water. As cargo gets farther away from Canton the tax barriers become more numerous and hinder free communication. Shipments destined for Wuchow and other points in Kwangsi, as well as for that section of the Canton delta drained by the West River, should be transhipped from Hongkong direct to destination, rather than being forwarded first to Canton. In the import trade, Canton serves as a distributing center for the East and North River territory.

RAILWAYS

The railways in the Canton consular district are shown in the following table:

Railways	Head office	Mileage	Transportation rates, per English mile		
			Classes	Freight per ton	Passenger fares
Canton-Kowloon: Chinese section.....	Canton.....	88.73	First.....	<i>U. S.</i> <i>currency</i> \$0.0124	<i>U. S.</i> <i>currency</i> \$0.0324
			Second.....	.0121	.0162
			Third.....	.0081	.0081
			Fourth.....	.0054	.....
British section.....	Kowloon (via Hongkong).	22.50	First.....	.0124	.0324
			Second.....	.0121	.0162
			Third.....	.0081	.0081
			Fourth.....	.0054	.....
Canton-Hankow.....	Canton.....	140.00	First.....	.0900	.0240
			Second.....	.0600	.0160
			Third.....	.0300	.0125
			Fourth.....	.1350	.....
Canton-Samshui.....	do.....	31.00	First.....	.0290	.0125
			Second.....	.0240	.0090
			Third.....	.0160	.0065
Sunning Railway.....	Sunning (Kwangtung)...	83.30	First.....	.0100	.0250
			Second.....	.0050	.0150
			Third.....	.0025	.0075

¹ Dangerous goods.

As of additional interest, the special reduced basic fares between Canton and Hongkong via the Canton-Kowloon Railway by the express trains are as follows (one way): First class, \$3 United States currency; second class, \$1.50; third class, \$0.60.

During the past few years unsettled conditions have interfered seriously with the operation of railways. No regular schedules have been maintained. Surcharges, often amounting to as much as 25 per cent, have been imposed by the authorities.

Through trains have not operated on the Canton-Kowloon Railway for so long that practically all traffic has been deflected to water routes. The Samshui Railway is important chiefly for its passenger service, which yields a good revenue. Tobacco and the mineral products of the North River region are conveyed to Canton over the Yueh-Han line. Imports reach their destination over the same road. The Sunning Railway has maintained a fairly consistent schedule and plays an important part in the economic life of probably the wealthiest section of the consular district. Piece goods, cigarettes, flour, metals and minerals, and other items of important trade are carried on this road. In general, however, conditions on the railways are unsatisfactory from the standpoint of both foreign and domestic trade.

Of the four railway lines in the Canton district, the Canton-Samshui and the Canton-Kowloon (Chinese section) are more or less under government ownership and control. The Canton-Hankow (Kwangtung section) was originally under the control of an American syndicate, which later disposed of its interests to a Chinese joint-stock company known as the Kwangtung Mercantile Administration of the Yueh-Han Railway. The Sunning Railway enjoys

the distinction of having been built as a private Chinese enterprise and is owned and operated exclusively by a Chinese company. These railways are all of standard gauge, 4 feet 8½ inches, and their rolling stock is partly of American and partly of British manufacture and design.

The completion of the Canton-Hankow Railway is considered the most necessary step in obtaining railway facilities adequate to the proper development of the trade and commerce of the district. The advantages to trade of a trunk line extending from North to South China are obvious. None of the railways in the district is connected with others. It would facilitate the transfer of freight and passengers if a loop line should be built at Canton connecting the Canton-Hankow and the Canton-Kowloon lines. This would insure through shipment of cargo from the northern terminus of the Canton-Hankow line to Hongkong.

ROADS

Concerning the roads in the consular district, it may be said that in Canton and vicinity there are 25 miles of roads suitable for motor transportation. The estimated number of motor cars in operation at that place is 212. For passenger transportation of this class the rate is \$2 to \$3 United States currency per hour; for freight the charge is \$2.25 per hour per ton. Lungchow and Nanning each has about 40 miles of motor roads.

The motor roads at Canton have been constructed during the last few years and are maintained by the municipality. There are no fees or tolls. Definite plans for the extension of these roads have been adopted, but work is hindered by the unsettled conditions prevailing in the city. The roads at Nanning and Lungchow are used largely by the military, although there is a certain amount of civil traffic. The roads have deteriorated because of the lack of proper supervision and repair. The number of motor cars operating on the highways outside of Canton is small.

SUMMARY OF METHODS OF TRANSPORTATION

Transportation within the Canton consular district is chiefly by water. Cargo is transported by means of steamboats, launches, and junks, but it is impossible to estimate the average mileage per day or the cost per ton-mile. Likewise, no data are available relative to transportation by motor cars other than the fact that the load per car rarely exceeds 1½ tons. Carts are used only in the vicinity of Pakhoi. Wheelbarrows are utilized to convey cargo in the Pakhoi district, but are not found elsewhere. Donkeys and mules serve as pack animals in western central Kwangsi near Poseh. Coolie carriers are very numerous. A coolie carries an average load of 70 pounds and travels some 12 miles per day for a wage of about \$0.60 United States currency.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The Chinese Telegraph Administration has 106 stations in Kwangtung Province and 71 in Kwangsi. The rate to Shanghai

is \$0.27 Hongkong currency per word (one Hongkong dollar equals about \$0.50 United States currency), while to New York the rate is \$2.10 per word. The Canton Wireless Service, installed by the admiralty of the local government, has three stations in Kwangtung and one in Kwangsi. The rates are the same as those just mentioned for the Chinese Telegraph Administration.

Business firms on Shameen Island have used the wireless service regularly for urgent business during the time when the Chinese Telegraph Administration's line to Hongkong has not been in operation. During the last year telegrams to and from Canton and the outside world have usually been carried between Canton and Hongkong by post, as the telegraph service between the two ports has been interrupted.

Radio messages are transmitted to any point of the world at prevailing rates. It takes an average of 17 hours to get a message through to New York. Rates to Hongkong are \$0.20 for each plain word and \$0.30 for each code word. On messages received from Hongkong prepaid, an extra charge of \$0.20 per message is collected for the carrying coolie. Messages for transmission from Canton are received from 11.30 a. m. to 12 m. and from 2 to 5 p. m. Firms making regular use of this radio service report that it is regular and satisfactory for Hongkong and oversea messages.

TELEPHONES

There are four telephone services in the Canton district, the largest of which, operated by the Canton provincial government, has 3,000 subscribers. It is operated by the manual system, and the equipment is Swedish, Japanese, and American. Rates vary from \$3.50 to \$5.50 per month. Plans are being formed for extension and improvement of the telephone service in the Canton district, but it is not likely that anything will be accomplished until conditions are more nearly normal.

POSTAL FACILITIES

The post-office system in the Canton district is a part of the general Chinese Post Office, the administration of which is centered in the Directorate General of Posts in the Ministry of Communications at Peking. The rates applicable to the district are the same as those prevailing in other sections of China, being 3 cents for domestic postage and 10 cents for foreign postage. The rate to Hongkong is 4 cents. (All rates are given in Mexican currency, one dollar of which equals approximately \$0.50 United States currency.)

Canton has a special system of postal zones, which, however, has no bearing on postal rates between points in the district and other parts of China or points abroad.

SHIPPING AND WAREHOUSING FACILITIES

The harbor facilities at Canton are indicated in the following table:

Name of landing or anchorage	Depth of water at tides		Dock accommodations	Method of transference of cargo from ship's tackle to port
	High	Low		
	<i>Feet</i>	<i>Ft. in.</i>		
Front-reach wharves for river steamers...	12	6 6	None.....	Cargo boats, lighters.
Butterfield & Swire back-reach landing...	12	6 6	Private wharves..	Coolie labor and ship's tackle.
Jardine & Matheson back-reach landing...	12	6 6	...do.....	Cargo boats and/or lighters in midstream.
China Merchants Steam Navigation Co...	12	6 6	...do.....	Do.
Nippon Kisen Kaisha.....	12	6 6	...do.....	Do.

The Chinese Maritime Customs returns show that the amount of tonnage entered and cleared at the port of Canton during 1923 amounted to 6,569,457 tons, exclusive of junks. Situated in the heart of a delta formed by the confluence of the East, West, North, and Pearl Rivers, Canton enjoys excellent water communication with the interior districts. These waterways directly and indirectly tap practically every buying and producing section of the consular district. The railways also play their part in the dissemination of cargo.

CARGO-HANDLING FACILITIES

There are five private landing wharves or anchorages at docks belonging to the front-reach wharves for river steamers and three British and one Japanese steamship line. These have no facilities for handling heavy cargoes except such gear as is carried by the ship. Discharge of cargo is effected wholly by coolie labor using bamboo poles and baskets. The cost of transferring cargo from ship's tackle to the port varies according to distance or destination.

In view of the fact that all cargo is moved by hand, the ordinary packing for export and marketing is generally sufficient provision against damage or loss.

WAREHOUSE AND STORAGE FACILITIES

There are no public warehouses, but the steamship companies and large private import firms have their own private warehouse facilities. There are eight of these altogether, and none of them accepts goods for storage. Company cargo is usually stored 14 days free of charge, after which the rates are nominal. In the case of two Chinese companies, their warehouses may be rented outright at the rate of \$350 United States currency per month.

All these warehouses are of brick and steel construction, varying in details, and are of extended capacity. Transfer of goods from landing to warehouse is entirely by coolie labor.

It should be emphasized that outside cargo is not accepted for storage by Canton firms having warehouses. Transfer of goods from the warehouses to the dealers is effected by coolie labor, lighters, or cargo boats. Shipment to the interior is effected by cargo junks, by river steamers, and by rail.

PUBLIC WORKS AND UTILITIES

ELECTRIC LIGHT PLANTS

By far the most important electric-light plant in the Canton district is the Kwangtung Electric Supply Co. (Ltd.), of Canton. It has a capacity of 10,000 kilowatts in steam turbines and 1,875 kilowatts in Diesel engines. Turbine equipment is entirely of American origin, and plans for extension include the purchase of an additional 5,000 or 10,000 kilowatt turbine. Expansion of this plant is hampered by unsettled conditions, as is the case with all others in the district. There are at least six other electric-lighting plants in the district, notably at Fatshan, Kongmoon, and Wuchow. They are all under Chinese operation and are equipped for the most part with English gas and oil engines.

WATERWORKS

The Kwangtung Water Supply Co. at Canton has a capacity of 9,000 gallons per minute, and supplies water at a rate of 38 cents (gold) per 1,000 gallons. The equipment is British, consisting of three steam reciprocating pumps and steam turbine driven pump. Additional and improved water-supply equipment is greatly needed, but can not be undertaken during present conditions. A separate waterworks is maintained on Shameen, the British concession; its somewhat antiquated equipment is of British manufacture.

TRAMWAYS

The Kwangtung Tramway Co. (Ltd.), of Canton, is a Chinese concern with some British capital invested. It has the franchise to operate on all Canton streets, inside the city, within a 10-mile radius. Because of disturbed conditions it has not operated since June, 1923.

CONSERVANCY AND RECLAMATION WORKS

The Conservancy Board in Kwangtung was created during the latter part of 1914 by presidential mandate of the Peking Government. From 1914 until 1919 the work of the Conservancy Board was carried on with provincial funds, but since 1919 it has been maintained chiefly with funds granted out of the surplus of the Maritime Customs. At the beginning of 1924 the board was faced by such a shortage of money that the suspension of all operations was threatened. To meet this situation and to prevent the dissolution of the board, two proposals are being worked out. The first contemplates the imposition of a direct surtax on Canton Maritime and Native Customs revenue, the surtax to be used for harbor improvement. The second proposes to obtain a Government grant. Conservancy work is extremely important in the district. Several steamers have grounded recently in consequence of the silting which is taking place in the Canton Harbor and its approaches. The disastrous effects and economic loss which result yearly from floods could be minimized if there were sufficient funds to carry out the plans of the Conservancy Board.

IMPORT AND EXPORT TRADE

According to the annual report of Consul General Douglas Jenkins for 1924, Canton's trade in 1924 fell considerably below that of 1923, the Chinese Maritime Customs returns showing the total value of imports and exports as \$168,629,388 United States currency in 1924, as compared with \$184,373,183 in the previous year. The shrinkage in imports from foreign countries was the most striking feature of the year's trade, foreign imports for 1924 amounting to only \$42,807,066 United States currency, as compared with \$58,757,435 in 1923. Exports to foreign countries also declined, while exports to Chinese ports were about the same as in the preceding year, and imports from Chinese ports substantially increased. Declared shipments to the United States amounted to \$19,859,883.

The following table shows the value of the foreign trade of the various ports in the Canton consular district during the years 1903, 1913, 1923, and 1924:

Ports	1903	1913	1923	1924 ¹
	<i>United States currency</i>	<i>United States currency</i>	<i>United States currency</i>	<i>United States currency</i>
Exports from—				
Canton	\$31,168,330	\$43,875,367	\$81,397,992	\$74,312,677
Kiungchow	1,270,699	1,874,406	3,661,358	3,087,042
Kongmoon	(?)	1,307,267	2,238,723	1,444,611
Lappa	7,186,578	3,762,184	3,115,077	4,054,688
Lungchow	11,001	7,317	114,521	142,517
Nanning	(?)	2,398,290	1,662,046	1,652,717
Pakhoi	956,126	661,026	1,890,340	1,473,543
Samshui	740,582	1,299,997	1,060,441	857,405
Wuchow	1,681,658	2,672,884	4,664,956	5,147,179
Imports to ² —				
Canton	10,013,668	38,256,493	102,975,203	42,807,066
Kiungchow	1,623,533	2,893,109	3,402,910	3,700,868
Kongmoon	(?)	4,925,631	12,444,001	10,952,282
Lappa	3,537,722	9,211,141	15,173,025	17,727,800
Lungchow	736,141	71,465	110,372	85,204
Nanning	(?)	3,079,497	3,069,605	2,234,423
Pakhoi	1,240,405	1,335,107	2,929,634	2,345,191
Samshui	1,097,236	4,201,245	7,708,892	6,622,148
Wuchow	3,613,880	8,949,304	9,727,400	4,584,400

¹ 1924 figures converted at the ratio 1 tacl=\$0.81.

² No statistics available.

³ Foreign imports only included in 1924.

IMPORT TRADE

The following table shows the principal imports at the port of Canton during the years 1913, 1923, and 1924:

[Quantities are stated in thousands of units given; values in thousands of United States dollars]

Principal articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Cotton manufactures		3,461		6,224		4,719
Silk piece goods		12		88		125
Woolen and cotton mixtures		99		1,009		903
Woolen goods		70		829		999
Brass and yellow metals	pounds	773	1,264	260	1,625	472
Copper ingots and slabs	do.	236	36	88	37	58
Iron and steel products		338	752			1,309
Lead pigs and bars	pounds	3,239	108	2,446	121	105
Ammonia sulphate	do.	2,709	88	15,669	677	454
Bran	do.	17,379	3	136,586	1,490	156

Principal articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Macaroni.....pounds..	2, 179	97	1, 622	170	800	85
Rice and paddy.....do..	48, 893	839	999, 924	24, 299	365, 300	10, 171
Cigarettes.....number..	132, 585	278	111, 737	332	323, 000	820
Clothing.....		297		184		379
Dyes.....		144		488		772
Electrical supplies.....		72		102		443
Fish and fish products.....		891		1, 834		996
Flo. r.....pounds..	56, 962	1, 228	60, 472	1, 537	66, 300	1, 648
Fruits, dried and preserved.....do..	421	9	2, 521	140	800	69
Ginseng.....do..	27	55	20	68	48	95
Glass and glassware.....		121		201		134
India rubber and manufactures.....pounds..	397	106	475	196		301
Jade stones.....		116		380		184
Leather and leather goods.....						405
Petroleum products:						
Fuel oil.....tons..	1	17	5	80	6	104
Kerosene.....American gallons..	14, 797	1, 587	11, 846	2, 603	6, 738	1, 505
Lubricating oil.....do..	43	1	265	100	376	115
Paraffin wax.....pounds..	2, 823	116	6, 203	312		
Machinery.....		147		449		218
Paper.....		871		941		1, 463
Salt peter.....pounds..	90	3	1, 330	90		131
Soap.....		68		25		55
Sugar.....pounds..	62, 902	1, 974	54, 474	3, 430	60, 133	4, 577
Tea.....do..	687	139	1, 460	283	2, 000	277

Canton's import trade had more than doubled in value during the 20-year period between 1903 and 1923, but the figures for 1924 show a falling off of more than 50 per cent as compared with the preceding year.

On the whole the trade in cotton goods has been good. A particularly noteworthy feature of the trade was the advent of Japanese competition. In 1903 Japan shipped practically no cotton goods to the Canton market. By 1923 the Japanese had obtained a good share of the trade, particularly in gray shirtings, jeans, and yarns. The United States has never been an important factor in the market.

Woolen and cotton goods (mixed) and woolen goods have maintained a most satisfactory growth and now form a relatively important item in the import trade—principally from Great Britain, Japan, and Germany. Melton cloth and suitings deserve special mention.

In metals and minerals satisfactory advances have been recorded in brass sheets and plates, iron and mill-steel bars, and wire nails. A fairly static condition has been maintained in lead pigs and bars (the importation of which has averaged more than \$100,000 United States currency per year) and in tin plates.

Marked activity has been apparent in the ammonia sulphate market. From no importations in 1903, shipments advanced to a value of \$88,402 United States currency in 1913 and to \$676,987 in 1923. In 1924 the value was \$454,000. The United States supplies some, although Great Britain rather dominates the market.

The Cantonese have become relatively large consumers of condensed milk in the last 20 years. The United States has a fair share of this trade.

Imports of cement also have shown remarkable growth, due to increased demand for construction purposes.

Rice and rice paddy form together the largest item in the import tables. Imports originate largely in Siam and French Indo-China.

The value of 1923 shipments amounted to over \$24,000,000, while in 1924 there was a sharp decline, to \$10,171,000.

Imports of cigarettes have advanced steadily. The 1924 imports represent more than 15 times those of 1903 and nearly $2\frac{1}{2}$ times the amount brought in during 1913.

Coal imports into Canton have increased steadily, the chief sources of supply being North China, Formosa, and French Indo-China.

Electrical materials did not appear in any quantity in the import tables until 1923, when shipments amounted to more than \$200,000 gold. The United States has always been a strong competitor in this line.

Another commodity in which American participation has been marked and satisfactory is wheat flour. The quantity shipped into Canton from all sources rose from 30,642,801 pounds in 1903 to 56,961,866 pounds in 1913, to 60,472,440 pounds in 1923, and to 66,300,000 in 1924. Canada and Australia are the chief competitors that the United States faces in this field.

Imports of machinery have been of particular interest to the American trade. It seems probable that the Canton market will continue to deserve attention, particularly if conditions revert to a more normal basis.

Because of the growth of the match industry at Canton, there has been increasing activity in the importation of match-making materials. These include chlorate of potash, wood splints, and paraffin wax. Japan has been the largest source of supply.

Imports of kerosene advanced from \$1,587,000 United States currency in 1913 and to \$2,603,000 in 1923. In 1924 there was a decrease to \$1,505,000. The United States, Sumatra, and Borneo contribute the supply.

Paper is an important item in the trade of Canton. Imports in 1923 amounted to \$941,000 United States currency, of which the largest items were common printing paper and "machine-glazed cap." In 1924 there was a notable increase to \$1,463,000. Sweden, Norway, Denmark, and Japan have supplied the bulk of the demand.

The 1924 imports of sugar were valued at \$4,577,000, as compared with \$3,430,000 in 1923 and \$1,974,000 in 1913. Most of the supply comes from the Netherlands East Indies.

EXPORT TRADE

Export statistics are presented in the table below (reexports being included in these figures) :

[Quantities are stated in thousands of units given; values in thousands of United States dollars]

Principal articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Cotton manufactures		254		1, 194		3, 808
Woolfram ore	pounds			254	1, 600	104
Bags	number	1, 532	72	1, 226	71	6, 418
Bamboo and bamboo ware			51		447	443
Bean curd, dried	pounds	2, 193	83	1, 781	110	1, 821
Books, printed	do		154		187	125
Brassware	do	424	115	465	100	618
Bristles	do	121	26	138	69	198
					37	28

Principal articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Buttons.....		172		25		60
Cassia..... pounds.....	20, 172	1, 279	16, 339	612	24, 100	1, 014
China ware.....		234		245		291
Cement..... pounds.....	27, 309	128	1, 938	36	1, 200	8
Eggs, fresh..... number.....	33, 431	200	7, 768	93	7, 343	80
Fans..... do.....	107, 323	88	11, 470	194	54, 376	754
Feathers..... pounds.....	42	5	2, 069	164	1, 240	64
Firecrackers and fireworks..... do.....	8, 638	1, 110	8, 769	1, 238	9, 466	1, 419
Fruits, fresh, dried, etc..... do.....	13, 487	117	8, 093	111	27, 866	1, 879
Furniture.....		66		59		114
Garlic..... pounds.....	11, 016	170	3, 964	88	3, 733	72
Ginger, fresh..... do.....	1, 231	121	9, 658	194	9, 600	258
Glass, all kinds.....		135		167		240
Grass cloth..... pounds.....	37	74	26	51	38	59
Groundnuts (peanuts), in shell..... do.....	9, 789	245	20	1		
Hair, human..... do.....	1, 590	356	507	168	533	158
Hides, cow and buffalo..... do.....	893	144	173	18	296	72
Ivory ware.....		13		56		76
Joss sticks and powder, etc..... pounds.....	3, 023	89	4, 210	176	5, 733	198
Leather and leatherware.....		1, 829		89		1, 525
Litchis, dried..... pounds.....	827	155	867	184	1, 733	330
Matches..... gross.....			2, 999	994	2, 093	680
Mats and matting.....		1, 552		2, 356		1, 210
Meats, dried and preserved..... pounds.....	809	178	34, 284	1, 390	500	236
Medicines..... do.....	4, 519	293	4, 290	313	4, 933	288
Oil, Vegetable.....		138		48		172
Paper..... pounds.....	1, 320	139	5, 241	454	5, 467	561
Rattan and rattan ware..... do.....	2, 213	77	58, 762	284	48, 000	210
Samshu..... do.....	2, 532	109	2, 254	125		
Seeds..... do.....	877	74	1, 139	123	1, 333	149
Shoes and boots..... pairs.....	130	66	531	308	559	274
Silk, raw..... pounds.....	6, 354	20, 886	5, 805	44, 242	6, 216	37, 651
Silk waste..... do.....	5, 284	1, 979	5, 442	3, 526	7, 866	3, 803
Silk piece goods..... do.....	1, 240	6, 103	867	6, 762	900	6, 811
Silk and cotton mixtures..... do.....	252	76	223	75	75	194
Silk embroideries..... do.....	84	556	83	743	128	1, 271
Silk floss, Canton..... do.....	10	29	29	51	15	62
Silk thread..... do.....	30	97	44	80	17	71
Silverware.....		165		326		383
Sugar..... pounds.....	5, 280	133	2, 804	89	367	20
Tea, black..... do.....	1, 836	319	3, 284	717	2, 533	536
Tobacco, all kinds..... do.....	7, 919	660	11, 368	1, 765	12, 933	1, 912
Umbrellas.....		33		95		297
Vegetables, dried, fresh, etc.....		132		280		247
Woodware.....		76		271		207

Examination of the export figures reveals some interesting facts. A remarkable growth has occurred in the value of the trade of Canton. Shipments for 1903 amounted roughly to \$31,000,000 United States currency and advanced to \$43,000,000 in 1913 and to \$81,000,000 in 1923. In 1924 there was a slight recession, to \$74,000,000.¹

As regards cotton goods, the figures for 1923 and 1924 indicate that Canton is becoming a manufacturer and exported of this commodity. The output goes mainly to Chinese communities abroad.

In metals and minerals the only item of importance is wolfram or tungsten ore. No exportation occurred during 1913, but by 1923 shipments had assumed considerable proportions. The demand for this commodity was particularly keen during the World War.

Bamboo baskets and bamboo ware have acquired popularity in recent years. The chief buying center has been the United States.

Bristles have remained a fairly staple item in the export trade. The demand has remained steady.

Cassia is an export commodity of good proportions. The 1924 export figures are particularly high.

¹ In these discussions the values of exports and imports are stated in United States currency.

During the period under review shipments of chinaware, especially fine chinaware, have increased. The United States has been a good buyer of this commodity.

In general a big forward movement has been evidenced in exports of feathers, duck and fowl, though 1924 registered a decrease from the figures for 1923. The demand has come from Europe as well as from the United States.

Firecrackers are another commodity showing a rapid advance in the export trade. Exports jumped from \$368,193 in 1903 to more than \$1,100,000 in 1913, with this figure slightly bettered in 1923. In 1924 there was a further increase to \$1,419,000. The United States is a consistent purchaser.

Fresh ginger has shown satisfactory increases in both the value and the quantity of shipments abroad. Human-hair exports for 1913 were unusually large. The figures dropped to \$168,451 in 1923 and \$158,000 in 1924, which, however, represents a substantial advance over 1903. The foreign demand for ivory ware has not been consistent, but the trade has been fairly brisk during the past few years; in 1924 there was a substantial advance over the preceding year. During the period under discussion Canton has become an exporter instead of an importer of matches. The 1913 figures show no exportation of this commodity; exports for 1923 amounted to \$994,218.

Exportation of mats has shown a steady increase. The foreign demand for Canton mats and matting is quite universal, these commodities being particularly popular in the American market.

Canton has long been a center for the exportation of medicines. The export figures show a general forward movement, the cargo being destined principally for other Chinese communities.

The foreign demand for rattan and rattan ware revealed a tremendous and steady growth up to 1923. The exports for 1913 were valued at \$77,189, while those for 1923 totaled \$283,808. In 1924 there was a decrease to \$210,000.

Raw silk has shown considerably more fluctuation in value than in quantity. In 1903 there were exported from Canton 4,431,033 pounds. This figure rose to 6,057,200 pounds in 1913, dropped to 5,739,349 in 1923, and rose again to 6,216,000 pounds in 1924. The value of exports advanced from \$13,976,627 in 1903 to \$20,094,785 in 1913 and to \$43,819,948 in 1923. In 1924 the value declined to \$37,651,000. It is this commodity that makes Canton important as an export center for shipments to the United States.

Exports of waste silk reveal some increase in quantity. Values advanced from \$1,979,193 in 1913 to \$3,526,662 in 1923 and \$3,803,000 in 1924.

Silk piece goods form a large item in the export trade, but are not of particular interest to America, as shipments go principally to India and Chinese communities abroad.

Silk embroideries are entering more and more into the foreign trade of the port. Shipments amounted in value to more than \$550,000 in 1913 and more than \$700,000 in 1923, while in 1924 there was a striking increase to \$1,271,000.

A phenomenal growth has been witnessed in tobacco leaf. Canton tobacco leaf has become important as a filler in the manufacture of cheap cigarettes.

Prepared tobacco has revealed a forward movement so far as the value of shipments abroad are concerned. The quantity of exports, however, remains fairly uniform.

It should be noted that exports from Canton are listed in the customs returns as exports to Hongkong and as exports to other parts of China. Under the heading "exports to Hongkong" are listed practically all of the exports from Canton to Great Britain, Germany, France, the United States, and Japan. From the invoices which have passed through the consulate at Canton it is possible to ascertain the percentage of Canton exports that go to the United States. With other countries, however, there is no way to determine the ultimate destination of Canton exports, which go first to Hongkong and are transshipped from that port to various points abroad. Cargo shipped by direct steamer from Canton to foreign countries is listed as "exports to foreign countries," provided the steamer does not call at Hongkong. With the exception of a few Japanese vessels, however, there are no ocean-going ships operating directly from Canton to foreign ports exclusive of Hongkong. Thus the quantity taken by Hongkong includes not only cargo whose ultimate destination is the United States but also cargo which is bound for Japan, France, Great Britain, and other foreign countries, as well as the majority of the exports to other Chinese ports.

BANKING FACILITIES

The following table shows the leading banks in the Canton consular district that handle foreign exchange and bills:

Name	Nationality	Head office	Capital
International Banking Corporation	American	New York	Capital and surplus, \$10,000,000 United States currency.
Hongkong & Shanghai Banking Corporation.	British	Hongkong	Authorized, \$50,000,000 Hongkong currency; issued and fully paid up, \$20,000,000.
Chartered Bank of India, Australia & China.	do	London	Paid up, £3,000,000.
Peninsular & Oriental Banking Corporation.	do	do	Authorized, £5,000,000; paid up, £2,504,160.
Banque de l'Indo-Chine	French	Paris	10,000,000 francs.
Deutsche Asiatic Bank	German	Berlin	
Bank of Taiwan (Ltd.)	Japanese	Taipei, Taiwan	52,500,000 yen, paid up.
Yokohama Specie Bank (Ltd.)	do	Yokohama	100,000,000 yen.
Bank of Canton (Ltd.)	Chinese (British registered)	Hongkong	Authorized, £1,200,000; paid up, £1,078,530.
Bank of East Asia (Ltd.)	do	do	Authorized, \$10,000,000 Hongkong currency; paid up, \$5,000,000.
Banque Franco-Chinoise	French	Paris	10,000,000 francs.

LOCAL CURRENCY SITUATION ²

Foreign trade is conducted as a rule in Hongkong silver dollars. The silver 20-cent pieces are usually at a discount as compared with the Hongkong dollar, the highest discount for 1923 being 1.25 and the lowest discount being 1.14. Hongkong currency notes of various denominations are issued by the British foreign-exchange banks at Hongkong and circulate freely in most of the treaty ports. Remit-

² See special chapter on "Currency, exchange, and banking."

tance charges to Shanghai in dollars range approximately from 4 per cent premium to 4 per cent discount.

The only factor which differentiates the Canton situation from that obtaining in some other parts of China is the relation between Hongkong currency and Canton silver currency. The tendency of the latter to depreciate has an adverse effect upon foreign trade. When the Hongkong dollar is high with respect to gold, import trade is augmented and export trade retarded. Conversely, when Hongkong dollars are cheap the tendency is to restrict imports, while exports are stimulated.

ADVERTISING AND MERCHANDISING ³

Advertising in the Chinese vernacular newspapers is considered a fairly effective method of augmenting sales. Advertising through the medium of moving pictures is coming into more general use throughout the district. Before the performance begins and between films or during intermissions this matter is flashed upon the screens. This is of great value in familiarizing the populace with some special brand or "chop." The printed matter, of course, is in Chinese, always with a likeness of the particular commodity.

Posters and billboard advertising is common in Canton and is regulated by a department of the municipality which promulgated a definite system of rules during 1923. The municipality is divided into 12 advertising districts, in which the city has planned to set up 1,600 public billboards, the number to be increased when conditions warrant it. All advertising spaces are uniform in area and the charges are as follows per 100 copies of bills posted: Class A, per day, \$0.15 United States currency; class B, per day, \$0.10; class C, per day, \$0.08.

The posting of bills and advertising matter on immovable property, such as buildings, as well as on movable property, such as cars or steamers, is subject to the approval of the bureau. The tax levied on such advertising is given below (tax per month per 10 square feet): Class A district, \$2.50 United States currency; class B district, \$1.50; class C district, \$0.75.

Since the promulgation of the rules affecting the use of posters and billboards there has been a decided dropping off in the space utilized for advertising. The general opinion seems to be that the taxes and rates are somewhat higher than business houses can afford to pay. Non-Chinese concerns at present make no extensive use of the municipal advertising spaces.

TRAVEL FACILITIES

The majority of commercial travelers and tourists stop at the Victoria Hotel, under British management, which is the only non-Chinese hotel in Canton. The traveler has his choice of American or European plan, rates by the American plan varying from \$5 to \$14 gold per day. Monthly rates are computed as 24 full days. The accommodations of the hotel are limited, and it is frequently difficult to obtain rooms.

³ See special chapter on this subject.

For the past two years there has been a project on foot to build a new and larger hotel on the Shameen foreign concession, but, although ground has been broken, the construction is very slow. Under present conditions it is advisable for travelers to come to Canton from Hongkong by river steamer rather than by rail. Train service between the two ports is not only unreliable but is often unsafe. From Canton the interior districts may be visited by water or by rail; all the necessary traveling arrangements may be effected at Canton. However, visitors to the West River territory usually find it more practicable to take a steamer direct from Hongkong.

Every commercial traveler who visits the district should have in his possession powers of attorney and other credentials. Legitimate

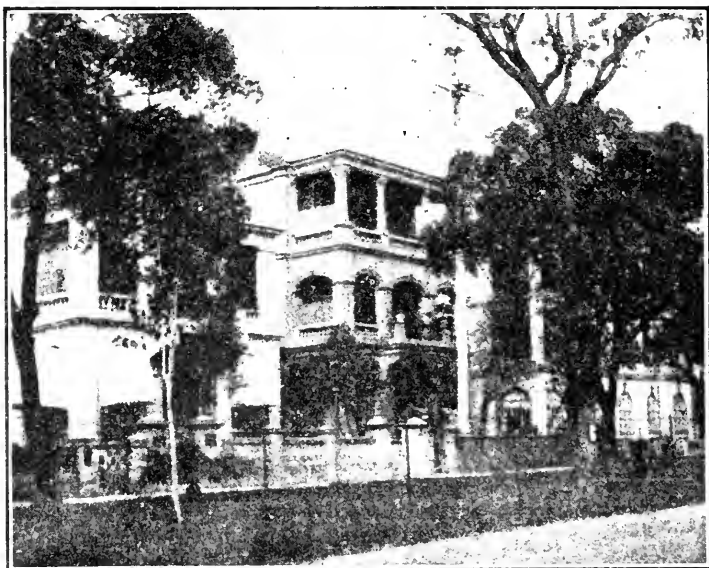


FIG. 16.—American consulate general, Canton. The United States has had a consular representative at Canton since 1784

business is often blocked by the failure to have such documents. Specific letters of introduction are useful. The commercial language of the port is English so far as foreign trade is concerned, and competent guides and interpreters may be obtained at the hotels for reasonable rates. The traveler making an initial visit to the district should call at the American consulate general.

TRADE ORGANIZATIONS

The following are the principal trade organizations at Canton :

- General Chamber of Commerce, Chinese ; address, " General delivery."
- British Chamber of Commerce ; address, " Shameen."
- French Chamber of Commerce ; address, " Shameen."
- German Chamber of Commerce ; address, " Tungshan."

The most important function of the Chinese General Chamber of Commerce is to bring the grievances of individual firms to the attention of the officials of the Government.

The trade organizations maintained by the British, French, and Germans are of a somewhat informal nature. Inquiries addressed to the various organizations are circularized among the firms of the nationals in question. The only American organization in the district is the American Association of South China, which has for its object the furtherance of general American interests, but is not equipped to carry on correspondence with business men in the United States.

PROPERTY VALUES AND RENTS

The following statement shows the general situation with regard to property values and rents in Canton:

[All values are in United States currency]

Location	Purchase price per unit	Rent (per month)		
		Office space	Warehouse space	Residential purposes
Bund.....	Varies from \$350 to \$1,750 per 100 square feet.	\$50 for 625 square feet.	-----	-----
Tungshan.....	-----	-----	-----	\$75 to \$100 for 8-room unfurnished house without water or light.
Chinese city....	Varies from \$150 to \$600 per 100 square feet.	\$20 for 625 square feet.	\$350 per month for warehouse 280 by 80 by 18 feet.	\$2 to \$5 for 3 rooms, used by poorer class Chinese; \$15 to \$30 for 5-room house, used by middle-class Chinese.
Shameen.....	\$1,700 per square foot with old 3-story brick building.	\$300 for 3-story building, first floor used as office and upper floors as residence.	-----	\$150 to \$200 for suite of rooms, unfurnished.

Land values and rents are high at Canton and are believed to be increasing. The most attractive values are in some sections of the Chinese city, although real estate prices along the wide streets appear excessive. The residential district for Americans and Europeans is expanding and there is a tendency to move to suburbs, especially Tungshan, rather than to settle on Shameen, which is rather crowded. Several firms, including practically all of the German ones, have opened offices in the city. There seems little doubt that the business of the future will take place more and more within the native city and not on the foreign concession.

TAXES AND OTHER ASSESSMENTS

The generally unsettled situation which prevails in the Canton district makes it difficult to state what taxes and assessments would amount to under peaceful conditions. In the effort to raise funds to defray the expenses of each incoming government, extraordinary levies and taxes are imposed. These taxes take the form of collecting rents in advance and placing a surcharge thereon, of additional

taxes on public utilities, of increased police charges, of higher rates on the registration of lands, of compelling the registration of property with an attendant tax, and of various other measures. As a rule, however, foreigners enjoying extraterritorial rights are not required to pay these assessments, although most of them do pay certain taxes which are considered reasonable and nondiscriminatory.

As in other parts of China, foreigners belonging to nations which have extraterritorial privileges may hold land for business purposes only in the treaty ports, and that only in the form of perpetual leases. Such arrangements for acquiring the right to land should be conducted through the consular officers in the district. There is no particular obstacle in the way of business men renting offices and residences in the treaty ports. In case any difficulty arises in regard to rentals, reference to the nearest consular official will often clear up the matter.

LIVING COSTS

The statement below indicates the ordinary living expenses at Canton. Boarding-house costs are not shown, because such accommodations are not available.

	Hotel board and room, per month	Board	Rent	Esti- mated necessary living expenses, per month
Single man.....	\$100	\$50	\$75	\$125-\$300
Single woman.....	100	50	75	150- 300
Married couple.....	190-200	100	100	200- 250
Married couple and two children.....	300-400			300- 400

NOTE.—Children under 2, one-fourth rate; under 8, one-half rate; over 8, full rate.

Living expenses in the Canton districts are believed to be high in comparison with most other sections of China. Residents of Shameen pay considerably more than those foreigners who dwell in the outlying suburbs. The disadvantages of suburban life are serious because of the relatively expensive and unsatisfactory methods of transportation and principally because at times it is not considered safe to pass through the native city.

The majority of the American and European residents of the Shameen concession belong to the Canton Club, an international organization maintaining a club building on the island.

There are a number of excellent mission schools in the district, but no good facilities for the education of American children, despite the fact that separate foreign schools are maintained at Paak-hoktung and at the Canton Christian College. The engagement of tutors is general, as is the practice of sending children to other parts of China for their secondary education.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

Certain characteristics of the Canton trade are worthy of special attention. The Chinese exhibit increasing eagerness to buy all kinds

of western commodities, and American manufacturers and dealers have secured a fair share of the trade. Several factors, however, tend to make the importation of many articles only temporary. Among such articles may be mentioned foreign-style shoes, hats and caps, umbrellas, wearing apparel of all kinds, watches, safes, small gasoline and oil engines, and the simpler types of industrial machinery. As a rule, the cost of the imported commodity is too high to fall within the purchasing power of the average Chinese. Foreign-made articles thus belong to the luxury class. When the indications of a widespread demand become manifest, the Cantonese use the imported goods as models and imitate them, placing native-made articles on the market at prices below those quoted on the imported goods. The native-made goods are altered to conform to Chinese tastes and requirements. In many cases the raw materials and the machinery are purchased from abroad. Hand labor and more or less primitive machines are employed at present, rather than intricate and highly specialized equipment. In view of these conditions, American endeavor should not divert too much attention to the sale of certain classes of merchandise. Initial sales in these lines offer opportunities for the disposal of American surplus production, but do not constitute fields in which substantial and permanent business may be built up. American efforts should rather be concentrated on supplying raw materials and machinery.

The introduction of modern industrial plants is beginning to present attractive openings for American trade. Electrical appliances and equipment of all sorts are in demand. When conditions become quiet in this section of China, there will arise a market for industrial machinery such as is used in weaving and knitting factories, in match-making concerns, in the production of bricks and cement, in tanneries, and in rubber sole, paper, and ice factories. At the present time such enterprises are in an incipient state. The Cantonese possess the necessary capital and necessary resources to engage in industrial activity along western lines; the only element lacking is a stable situation under which legitimate undertakings may be fostered.

American exporters have already obtained a good position in the Canton market in many lines, among which may be mentioned oil, cigarettes, sewing machines, flour, and general metals and minerals. Favorable activity has been apparent in American importation of railway materials, of construction equipment, such as reinforcing steel, cement, elevators, locks, and padlocks, and of plumbing accessories. Canned goods, such as condensed milk and milk substitutes, fruits, meats, and preserves, find a growing sale. Other commodities in the importation of which American participation is marked are chinaware, dental instruments, pumps and fittings, needles, telephone materials, hand tools, the better grades of paper, toilet articles and preparations, phonographs, automobiles, and photographic supplies.

Competition is severe and can be met only by high-grade production at prices which compare favorably with similar commodities from other foreign countries.

HANKOW CONSULAR DISTRICT

By Consul General P. S. Heintzleman

LOCATION AND AREA

The Hankow consular district includes the Provinces of Hupeh, Kiangsi, Honan south of the Yellow River, Shensi, Kansu, the Kokonor region, and Sinkiang (Turkestan), all in the central and northwestern portion of China, the aggregate area being roughly 1,000,000 square miles. The city of Hankow is situated on the Yangtze River at its confluence with the Han River, in latitude $39\frac{1}{2}^{\circ}$ N. (about the same as New Orleans) and longitude $114\frac{1}{2}^{\circ}$ E.

The climate is somewhat similar to that of the southern part of the United States, ranging in temperature from 20° to 102° F. There is a heavy rainfall during the summer, and there is a short rainy season in the late winter and early spring. The average annual rainfall is about 44 inches.

In area the Hankow consular district is the largest in China, comprising more than 25 per cent of the total territory of the Republic. From the southern point of Kiangsi Province to the northwestern point of Kansu the distance exceeds 1,600 miles; because of the extremely primitive methods of transportation (largely by chair, cart, and wheelbarrow) it would require more than one month to make such a trip.

POPULATION

No accurate census of the population has ever been taken, but the estimate made by the board of the interior in 1910 is generally accepted as the most reliable and is used in this report. The estimated area and population of the Provinces comprising the district are:

Provinces	Area	Population	Provinces	Area	Population
Hupeh.....	71, 428	24, 900, 000	Kansu.....	125, 483	5, 000, 000
Kiangsi.....	69, 498	14, 500, 000	Kokonor region.....	(1)	(1)
Honan south of Yellow River.....	60, 000	24, 000, 000	Sinkiang (Turkestan).....	550, 579	2, 491, 000
Shensi.....	75, 290	8, 800, 000	Total.....	952, 278	79, 691, 000

¹ Not known, even approximately.

About 80 per cent of this population is rural. Agriculture is of a very primitive character, and industries are, with some exceptions, still of the primitive household sorts. Density of population is greatest in Honan along the Yellow River, where it is 376 persons per square mile, and least in Sinkiang, where it is $4\frac{1}{2}$ per square mile. The average density of population for the district is 182 per square mile.

CITIES

The treaty ports in the consular district, in the order of their commercial importance, are: Hankow, population 1,000,000, opened to trade in 1862; Kiukiang, population 36,000, opened in 1862; Ichang, population 55,000, opened in 1877; and Shasi, population 95,000, opened in 1896.

There are a number of other cities of local and trade importance, and a few ports of call for passengers and cargo on the Yangtze River, such as Hukow, Wusueh, Lukikow, Hwangshihkang, and Hwangchow. These places were opened as ports of call by the Chefoo Agreement of September 13, 1876, and the Yangtze Regulations of 1898.

American firms and residents in the treaty ports are as follows: Hankow, 18 firms and 248 residents; Kiukiang, 1 firm and 76 residents; Ichang, 3 firms and 32 residents; Shasi, 1 firm and 9 residents. In addition to the 365 Americans living in the treaty ports there are 922 resident in various interior cities, making a total of 1,287 Americans resident in the district. At least 75 per cent are engaged in missionary work.

In Hankow (which, except Kiukiang, is the only city in the district that has foreign concessions) there are about 4,400 foreign residents. Great Britain, France, and Japan have concessions here, as had Germany and Russia formerly, these now being administered by the Chinese Government as special administrative districts. Great Britain has the only concession in Kiukiang.

PHYSICAL FEATURES

Honan Province is shaped like an irregular triangle. It comprises three river basins—the Yellow River in the north, the Hwai River in the south, and the Han River in the southeast. The Peh and Tan Rivers flow into the Han River. Along the Yellow River, Honan is level, fertile, and populous; the southern portion is mountainous. Haifeng, the capital, is situated about 3 miles from the southern bank of the Yellow River, the bed of which is here elevated above the adjacent country.

The Yangtze River flows through the southern part of Hupeh Province, while the Honan River drains nearly the whole Province joining the Yangtze at Hankow. The most important centers in Hupeh are the Wuhan cities (Hankow, Hanyang, and Wuchang), at the confluence of the two rivers. Hankow is the largest industrial and shipping city in central China. Other important ports are Shasi and Ichang. The former has a canal which discharges into the Han River 40 miles away. Ichang was formerly the head of navigation for light-draft vessels on the Yangtze, until the introduction in 1900 of the steamers that navigate the rapids and gorges. Above Ichang are the Wushan, Milan, and Lukan gorges, famous for their picturesque scenery.

The Great Wall of China forms a part of the northern boundary of Kansu Province. The Province is virtually divided into two sections by the mountains running nearly north and south and separating the Wei and Yellow River Basins. The Wei Basin is

fertile like the plains of central Shansi, but the rivers are of little use for navigation.

The principal cities are Lanehow, the capital, on the Yellow River; Pingliang on the King River; Kungchang on the Wei River; Minchow, in the southern part, on a branch of the Yellow River; and Sining.

Kiangsi Province lies south of Anhwei and Hupeh, between Chekiang and Fukien on the east and Hunan on the west, reaching from the Yangtze to Kwangtung Province on the south. The important centers are Kiukiang, on the Yangtze River; Nanchang, the provincial capital, on the Kan River; Nankangfu, near the mouth of the Poyang Lake; Jaochow and Kingtehchen in the northeastern part, the latter famous for its porcelain industry; Pingsiang near the Hunan border, where there are extensive collieries; Kianfu, in the south-central part, on the Kan; and Kanchow, in the extreme southern part, likewise on the Kan.

Shensi is bounded on the north by the Ordos country (inner Mongolia), from which it is divided by the Great Wall, on the east by Shansi and Honan, on the southeast by Hupeh, on the south by Hupeh and Szechwan, and on the west by Kansu. This Province has three separate geographical divisions—the fertile loess tablelands in the north; the plain in the center drained by the Wei River and its tributaries; and the mountains in the south. The northern section has a good soil, but, on account of the uncertainty of the rains, agriculture is rendered precarious. The beds of the many small streams are cut deep into the prevailing loess formation, and consequently the roads across them are few. Yulinfu in the extreme north and Yeninfu in the north-central part are the principal cities. The most populous section is central Shensi, in the fertile Wei River valley.

AGRICULTURE

The Chinese are primarily agriculturalists, and most of the territory in the district, except the mountainous sections, is under cultivation. The soil is fertile and has great agricultural potentialities, although the wooden plow, the wooden-wheel cart, and the primitive hoe—all of which have come down from very ancient times—do not make the most of them. The following facts relate to the principal crops of the district, the first seven being given in the order of their monetary importance as articles of export.

Cotton.—Produced in Hupeh and Honan (planted in May, harvested in September and October); yield per acre, 100 to 275 pounds.

Sesame.—Produced in Hupeh and Honan (planted in June, harvested in August, September, or October); yield per acre, 12 bushels.

Tea.—Produced in Hupeh and Kiangsi (harvested in March and April).

Beans.—Produced in Hupeh (planted in May, harvested in September), Honan (planted in June, harvested in October), and Kansu; yield per acre, 125 to 200 pounds.

Tobacco.—Produced in Hupeh, Honan, Kansu, Kiangsi, and Shensi.

Wheat.—Produced in Hupeh (planted in September, harvested in May), Honan (planted in October, harvested in June), Kansu, Kiangsi, and Shensi; yield per acre, 8 bushels and up.

Peanuts.—Produced in Hupeh (planted in March, harvested in September), Honan, and Kiangsi; yield per acre, 500 pounds.

Barley.—Produced in Honan (planted in September, harvested in June), Hupeh (planted in October, harvested in May), Kansu, and Shansi; yield per acre, 5 to 25 bushels.

Corn.—Produced in Hupeh (planted in March, harvested in July), Kansu (planted in April, harvested in September), and Shansi (planted in June, harvested in August); yield per acre, 15, 16, 35 bushels.

Wheat.—Produced in Hupeh and Honan (planted in February or March, harvested in June).

Millet.—Produced in Hupeh (planted in June, harvested in October), Honan (planted in May, harvested in September), Kansu (planted in April, harvested in August), and Shansi (planted in March, harvested in July or August); yield per acre, 20 to 30 bushels.

Peas.—Produced in Hupeh, Honan, Kiangsi, Kansu, and Shensi; yield per acre, 125 to 200 pounds.

Potatoes.—Produced in Hupeh (planted in February, harvested in June).

Rice.—Produced in Hupeh (planted in June, harvested in September), Honan (planted in April, harvested in August), Kiangsi, Shensi, and Kansu; yield per acre, 1,000 pounds and up.

Silk.—Produced in Honan.

Sweet potatoes.—Produced in Honan and Hupeh (planted in May or June, harvested in August, September, October, or November); yield per acre, 40 bushels and up.

Other agricultural products are rye in Kansu, buckwheat in Hupeh and Shansi, indigo in Honan and Shensi, and alfalfa in Shensi. Truck farming and gardening are extensively carried on throughout the territory. The entire production of rice is consumed by the inhabitants of the district; the total does not meet the full demand of the people. Cotton has become one of the principal articles of trade, and for the past several years ranked first in the exports of Hankow.

The silk industry in Honan Province is not so important an industry as it is in Shantung and other Provinces in the north, but it is worth mentioning.

Tea is one of the most important articles of export from Hankow. It is produced mainly in Kiangsi and Hupeh, which send their produce to Hankow for sale, making this port their chief black-tea market in China.

Tobacco is a mercantile crop in Hupeh, Kiangsi, Kansu, and eastern Honan and is grown intermittently for local consumption in Shensi. A few years ago there was a considerable stimulus to tobacco production, created by the establishment in Hankow of a cigarette plant which undertook to use Chinese tobacco. The most important producing sections of the district are Chunehow and Laohokow in Hupeh, the Poyang Lake region in Kiangsi, Lanchow in Kansu, and Siangcheng and Chenchow in Honan. There are no statistics of production available, but it is estimated that Hupeh produces annually about 20,000,000 pounds, of which 15,000,000 pounds are sold on the Hankow market. Kiangsi produces 6,000,000 to 8,000,000 pounds, of which about two-thirds is sold on the market for export, while Honan produces about 7,000,000 pounds, of which 6,000,000 are forwarded to Hankow for sale. There is no reliable estimate of the production in Shansi or Kansu.

Recent years have witnessed a wonderful development in the quality and exportation of sesame seed, which is grown very extensively in Honan and Hupeh; it has become one of the chief articles of the export trade of Hankow.

The beasts of burden are the horse, bullock, mule, donkey, ass, and water buffalo. In the preparation of the land for planting, mules and water buffalos are used for plowing. The livestock found throughout the district includes pigs, chickens, and ducks. Every

farm has a pig, and every family, urban or rural, has chickens. Cows and goats in limited numbers are to be found in practically all of the district.

No manufactured fertilizer, unless bean cake is so considered, is used by the farmer; sesame cake is also prominent in some sections; and an extremely limited amount of carbonate and hydrate of lime is found in the western part of Hupeh. It may be stated that animal manure, bean cake, and ashes are the only fertilizers in general use.

MINERALS AND MINING

In the consular district there are known deposits of gold, silver, lead, zinc, copper, antimony, iron, coal, fire clay, pottery clay, gypsum, salt, and limestone suitable for cement making. Some of these metals and minerals have been extensively worked in former times, and some are worked to a small extent at present.

In Hupeh the main mineral belt is adjacent to the Yangtze between Wuchang and the eastern boundary of the Province, and it continues into Kiangsi. In northern, western, and southwestern Hupeh are some mineral occurrences of various sorts. Coal is found in a great number of places in the west, obtainable over the valleys of the Han and the Yangtze with their tributaries, but the best bituminous coal found in China is said to come from near Tayeh.

Iron ore is obtainable in a number of places, but in Tayeh it has been operated to a considerable extent and is being mined for the account of the Tayeh and Hanyang iron and steel works. Most of the best ore in that region is being exported to Japan.

At present foreign capital can not be invested under favorable conditions and controlled by foreigners. The main difficulty is the want of adequate provision under existing laws to protect foreigners against the heavy expenses during the developing stage. It is not thought that there are any mines operated entirely under foreign control or management.

Local methods of mining endeavor to get out the available ore in the easiest possible manner, with no provision for future development, and when one hole is exhausted, for any reason, another is started. It is stated on reliable authority that less than 1 per cent of the mines in operation in this consular district use modern methods or foreign machinery.

While no statistics are available concerning the annual production of the various mines in the district, it is estimated that the annual output of the coal mines is 6,000,000 tons and of the iron-ore mines 600,000 tons. The output of the Pingsiang coal mine is reported to have been 863,756 tons in 1923, and of the Tayeh iron-ore mines for the same year 580,000 tons.

The following statistics from the returns of the Hankow Maritime Customs show the exports of certain metals in 1923, to all countries: Antimony, 4,682 long tons, valued at \$475,089; brass and copper ingots, 19 tons, valued at \$3,934; iron ore, 341,333 tons, valued at \$613,573; pig iron, 275,085 tons, valued at \$3,803,894; scrap tin, 72 tons, valued at \$43,580. All of the articles just named are taken by Japan, except small shipments of antimony to America and Europe.

The following leading mines are in active operation :

Tayeh Iron Mines, Tayeh, Hupeh; output about 70,000 tons per month; property of the Han-Yeh-Ping Iron & Coal Co., Shanghai.

Pingsiang Colliery, Kiagnsi; daily output of 30,000 tons; property of the Han-Yeh-Ping Iron & Coal Co., Shanghai.

Ching Hua Mining Co., Nanchang, Hupeh.

Kweichow Mines, Siangk, Hupeh.

Liuhekou Coal Mining Co., Honan, branch office, Hankow; amount produced annually about 180,000 tons.

Fu Chung Corporation, Chiaotso, Honan (British-Chinese); coal mining.

Hsiang Pei Shan Iron Mines, Hwangshihkang, Hupeh; the property has an estimated deposit of 20,000,000 tons of ore.

Possibilities for the sale of mining machinery will depend entirely upon the development of the mineral resources. As this progresses, there will be demands for the usual mining machinery and transportation equipment. Until satisfactory methods are devised for the development of these resources under foreign or native control, the demand for machinery will be insignificant and such as would be required by primitive methods for surface and near-surface mining.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The past few years has seen an advance in the number of flour and cotton mills established in the district. Six new cotton mills have recently been built in Wuchang, Hankow, and Chengchow. A large flour mill has recently been established at Kaifeng, Honan, known as the Yung Feng Flour Mill. The egg industry still maintains an important place among the successful enterprises of the district.

Both the Yangtze Engineering Works and the Hanyang Iron & Steel Works, formerly of great importance as industries, have not been successful recently, and the Yangtze Engineering Works has been compelled to close.

The Tayeh Mines & Iron Works, the property of the Han-Yeh-Ping Iron & Coal Co., is one of the chief industries of the district. The concern is largely controlled by Japanese, and large quantities of the ore are exported to Japan.

Other important plants are the Hankow Iron & Engine Works, the Government arsenals at Hanyang, Kaifeng, Honanfu, Sianfu, and Lanchowfu, the Government powder factory at Hanyang, the Government mint at Wuchang, 2 paper mills, 9 cotton mills, 4 oil mills, 2 cigarette factories, 13 plants manufacturing egg products, 8 brick and tile plants, 3 modern aerated-water works, 10 electric light plants, 2 match factories, 1 nail and needle factory, 10 flour mills, 1 tannery, and 1 meat-packing establishment. The foregoing plants use more or less modern machinery, and some of them are under foreign management and have foreign capital invested.

(A list of the principal manufacturing plants in the Hankow consular district is on file in the Bureau of Foreign and Domestic Commerce and may be obtained by interested persons upon application.)

Besides the industries above named there are a vast number of small works employing antiquated methods for the manufacture of

cotton thread and cloth, and of cloth by hand looms from grass, bamboo, and goat hair. Also, timber is sawn by manual labor, matches are turned out from small plants, flax is spun, rope is made, and various other domestic articles are produced by methods that are primitive but are useful in the economic industries of the country. To these might be added a number of other metal-working plants, such as those producing white brass, silversmiths' work, and other articles of small importance.

LABOR CONDITIONS

The following table gives the average daily wage paid the workman in various industries during 1923 (approximately 2,500 "cash" equal \$1 Mex. or \$0.50 United States currency) :

Carpenter, per day-----	cash--	800 with food.
Mason, per day-----	do----	700 with food.
Stonecutter, per day-----	do----	700 with food.
Blacksmith, per day-----	do----	900 with food.
Cotton spinner, per day-----	do----	400 without food.
Personal servant ("amah"), per month-----	do----	5,000 with food.
Ordinary coolie, per day-----	do----	1,700 without food.
Ricksha coolie, per day-----	do----	2,000 without food.

There has been some increase in the prices of all commodities during the past four years; the figures below show present prices of the seven necessities of life for the Chinese:

	Price
Rice, per picul (133 $\frac{1}{3}$ pounds)-----	Mexican dollars-- 10.50
Salt, per picul-----	do----- 11.20
Vegetable oil, per picul-----	do----- 19.20
Coal briquets, per picul-----	do----- 1.20
Firewood, per picul-----	do----- .50
Sauce, per catty (1 $\frac{1}{2}$ pounds)-----	cash-- 400
Tea, per catty-----	do----- 640

Labor conditions during 1924 show a general improvement over those of the preceding two years. The winter of 1922-23 saw considerable unrest among the factory workers and the laborers, and there were numerous strikes. As a result the owners of the industries affected finally conceded some of the workers' demands, which were chiefly for higher wages and shorter hours.

The average wages during 1923 and 1924 have generally kept pace with the food prices—which may be another reason for the recent absence of serious labor unrest.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The chief waterways forming an important factor in the commerce of the district are the Yangtze River (Yangtze Kiang) and the Han River (Han Ho).

The Yangtze enters Hupeh from Szechwan and is navigable for steamers throughout the year from Chungking to its mouth. Dangerous rapids exist above Ichang, which is the western port in the Hankow consular district. This river is navigable for ocean-going steamers to Hankow (595 miles) for seven months each year, and during all seasons excellent river steamship services are maintained

to and from Shanghai. Above Hankow steamship services of small vessels are maintained for about nine months of the year to Changsha and the entire year to Ichang. The Yangtze is the most important artery of communication in Central China.

The Hwang Ho, or Yellow River, describes the northern limits of the Hankow consular district, and while it is of considerable importance to commerce, it is of more particular interest to the Tientsin district.

The chief trading centers situated on the Yangtze are Hankow, Kiukiang, Shasi, Ichang, Wusueh, Wuchang, Hanyang, and Hsinti, the first four of these being open to foreigners. The principal trading centers on the Han (none of which are "open" to foreign business men, however) are Tsaitien, Yokiakow, Shayang, Anlu, Ichang, Siangyang, Fancheng, Laohokow, Yunyang, Hingan, and Hanchung.

There are no mechanical appliances on the wharves for handling cargo. If such equipment is required the vessel must provide it, but the useful coolie is capable of handling surprisingly heavy weights. It is not an uncommon thing to see heavy pieces of machinery, boilers, etc., being discharged by coolies. The port charges upon vessels, such as harbor dues, etc., are included in the tonnage dues, which are payable once every four months, entitling a vessel to call at any port in China without payment of further dues. The tonnage dues on vessels up to 160 tons are 1 mace per ton and, if over this, 4 mace per ton. The Yangtze River is the only stream upon which foreign vessels are used for commercial purposes; 13,255 vessels, with a tonnage of 7,453,701, entered and cleared from Hankow in 1923, as compared with 12,802 vessels, with a tonnage of 7,408,838, in 1922.

There are six important lines of river steamers running between Shanghai and Hankow. Freight rates vary for different commodities from 39 tael cents per picul of 133 $\frac{1}{3}$ pounds for beans and peas to 8.47 taels per 40 cubic feet for tea leaf, and they change from time to time. During the winter or low-water season freight rates increase by 10 to 15 per cent.

Four of the six shipping companies operating between Hankow and Shanghai maintain excellent passenger service (70 hours), and every night one or more steamers sail. The usual fare is \$50 Mex., while the round trip costs \$75 Mex. Passage can be secured on Japanese and Chinese steamers for \$40 Mex. for one way and \$60 for the round trip.

RAILWAYS

PEKING-HANKOW RAILWAY

The Peking-Hankow Railway, begun in 1898, was opened to traffic in 1905. Exclusive of branches it has a length of 754 miles. The line was built as a Franco-Belgian concession but came under Chinese control in 1909. As a result of civil dissensions, in which the rolling stock of the railway has been used by the various factions, and because of the unsubstantial type of bridge structures on the line, the Peking-Hankow Railway is rapidly assuming a state of general deterioration. The line was constructed with Belgian material and

the original rolling stock was Belgian, but in a number of instances this has been replaced by American locomotives and cars.

CANTON-HANKOW RAILWAY

The Hupeh-Hunan section of the Canton-Hankow Railway extends from Wuchang to Changsha, a distance of 286 miles. Under the Hukuang loan agreement the engineer in chief is a British subject, as are also the subordinates, except where Chinese are employed. The material and rolling stock are of American and Chinese origin, and at the present time are in relatively bad condition. About 250 miles remain to be constructed to complete the through line.

NAN-HSUN RAILWAY

The Nan-Hsun Railway, a provincial line from Kiukiang to Nanchangfu, 87 miles, was completed in 1915. The line was constructed by Japanese engineers from the proceeds of two loans made with the Bank of Taiwan, and it is operated by the Chinese under Japanese management. The material used, including the rolling stock, is largely American. The head office is at Nanchang, Kiangsi Province.

TAYEH IRON MINES RAILWAY

A light railway for use in conveying ore from the Tayeh mines to the Yangtze River runs between Tiehshanfu and Hwangshihkang, a distance of 17 miles. It is owned by the Han-Yeh-Ping Iron & Coal Co., Shanghai. The material and rolling stock come mostly from Japan.

KWANGYINGTANG-SHENCHOW SECTION (LUNG HAI RAILWAY)

This section was opened to traffic on May 1, 1924. Passenger trains run daily between Kwangyingtang and Shenchow, making connections with the Pienlo Railway at Honanfu, and by the latter with the Peking-Hankow Railway at Chengchow, Honan.

The Pienlo (Kaifeng-Honanfu) Railway, with head offices in Peking and Chengchow, is 115 miles in length.

SZECHWAN-HANKOW RAILWAY

This projected line is divided into two sections--the Han-I section extending from Hankow to Ichang (with a branch line from Yangkishung to Laohokow) and the I-Kwei section from Ichang to Kweichow, with possible extensions to Chungking and Chengtu. The surveys have been completed, but only a few miles of the line out of Hankow and out of Ichang have been laid; active work has not been carried on during the past nine years. A nominal force, consisting of 1 American engineer in chief, 4 student engineers, and 105 workmen, is maintained for the protection of the property.

CHOWKISKOW-SIANGYANGFU RAILWAY

This railway is only contracted for; surveys, however, have already been made.

ROADS

There are only a few modern roads outside of the foreign concessions in Hankow. There are paths all over the district; these are better in some localities than in others, and in parts of Honan they are in places broad enough to accommodate carriages, but in the main the paths are only sufficient to accommodate wheelbarrows. Some of the old imperial roads ran through this district en route to the south and west, but it is understood that none of them is sufficiently in repair to permit of their use by motor cars for an extended distance. These paths are in some districts extremely good for single-wheeled vehicles, and along the line of the imperial roads in Shensi and Honan and in the vicinity of the large cities in each of these Provinces and in Kiangsi there are a few miles of reasonably good carriage roads without any extensive macadamizing.

In Hankow there are not more than 25 miles of good roads (including cross streets), 15 miles of which are located within the foreign concessions. There is marked activity in the development of motor roads and bus lines in that part of Hupeh Province of which Siangyang, on the Han River, is the center. The Hupeh provincial authorities have recently completed the construction of a highway from Siangyang to Shasi, a distance of approximately 200 miles; an extension from Siangyang to Tsaoyang has been completed, and this road is being extended through to Huayuan on the Peking-Hankow Railway, a total distance of 170 miles. Another road is in operation from Siangyang to Laohokow, a distance of 53 miles. Also a branch of the Siangyang-Shasi road to run from Kingmen to Ichang, a distance of 80 miles, is projected.

A highway is being planned between Siangyang and Loyang via Laohokow and Nanyangfu. Its alignment will be through a region which heretofore has had very poor communications with the outside world.

It is believed that the construction of highways between Hankow and the other large cities of this district, connected with the main roadways in other Provinces, would increase foreign trade more than would a similar expenditure in the construction of railways. Such highways would bring great benefit to the country in the way of increased trade in new and old lines.

AVERAGE COSTS OF TRANSPORT

Below are given the average costs for transportation in Hupeh Province and supply points.

Methods of transportation	Average load	Average mileage per day	Average cost per ton-mile	Maximum haul
			<i>Mer.</i>	<i>Miles</i>
Railways.....	30-ton car.....	300-400	\$0.053	500
Steamboats.....	25-2,500 tons.....	50-250	.014	357
Junks.....	10-50 tons.....	10-15	.015	381
Motor cars.....	1 ton.....	200	.50	(¹)
Carts.....	1,600 pounds.....	30	.16	500
Camels.....	600 pounds.....	15	.44	500
Other pack animals.....	2-300 pounds.....	25	.35-.40	500
Wheelbarrows.....	300 pounds.....	17	.50	2-300
Coolie carriers.....	100 pounds.....	20-25	.80	2-300

¹ Limited by roads now in existence to 300 or 400 miles between specific points; no cross-country work.

TELEGRAPHS

The telegraph service is efficient and extends to practically all the larger towns in the district. There are 51 stations in Hupeh, 47 in Honan, 42 in Kiangsi, 18 in Shensi, 21 in Kansu, and 20 in Sinkiang. The rate for transmission is the established rate for all China—including cable rates to New York and other foreign ports. There are no commercial wireless stations in the district, though there is a Government wireless station in Wuchang exclusively for official purposes.

TELEPHONES

The telephone system in Hankow connects the "Wuhan cities"—Hankow, Wuchang, and Hanyang. Equipment consists of 5,219 telephone instruments (10,000 ultimate capacity), 3 centrals, and 138 miles of wire. It was installed by a Japanese concern with Japanese and a small amount of American equipment. The plant is modern in every particular. Rates per month for an unlimited service are:

Business telephone	\$21.00
Private telephone	19.00
Extension telephone under same roof.....each..	6.00
Table instrument	do... 2.50

The telephone administration of Hankow is one of the best in China and compares favorably with those in western countries.

There is a telephone system at Kiukiang, with Kuling connection, but the number of telephones is small.

POSTAL SERVICE

Chinese post offices cover the district, and the service is both prompt and dependable. The business at the Hankow post office during 1923 comprised 473,641,716 items, including 448,009,938 ordinary articles, 20,427,176 registered articles, 5,171,677 "express letters," and 32,925 insured letters. Money orders issued totaled \$95,993,800, and money orders cashed \$96,021,200.

During 1916 parcel post was established between China and the United States, and, Hankow being served by steam navigation or by rail, parcels are delivered from Hankow to the United States, or vice versa, without extra charge. The time required for first-class mail matter to be delivered from New York is approximately 30 days.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

All ships anchor in midstream or at pontoons in front of the town; berths in front of the consulates are reserved for the use of men-of-war. There are no special regulations relating to anchoring. Foreign shipping in the harbor is under the control of the Chinese Maritime Customs. Pilots are generally engaged at Shanghai for the trip up river, the usual fee for Chinese pilots being \$100 Mex. Ocean-going ships drawing 30 feet of water can reach Hankow during the high-water season, which lasts from May until October. Ships in the stream load and unload by lighters and junks. There

is one floating dock at the plant of the Yangtze Engineering Works which will admit vessels 200 feet long and of 30-foot beam. The cost of transferring cargo from ship's tackle to port, whether the vessel is in the stream or at a dock, is 1.50 taels per ton.

WAREHOUSING AND STORAGE FACILITIES

There is only one public warehouse in this district, located at Hanyang. The foreign firms all maintain private warehouses for storage purposes. Practically all transportation of goods from landing to warehouses is done by coolies, though motor trucks have in recent years come into use for this purpose.

PUBLIC UTILITIES

ELECTRIC LIGHT PLANTS

The electric light plants in the district are:

HUPEH PROVINCE

Hankow.—(1) The Hankow Light & Power Co. (British) is located in the Russian concession. The executive staff is British, and the company's head office is in London. The plant supplies current to the British, Russian, and French concessions, and has British machinery throughout. Current: Direct, 440-volt for power and 220-volt for light and domestic purposes. Capacity: Installed, 700 kilowatts; now being installed, an additional 1,000-kilowatt, direct-current, 440-volt and 220-volt engine-driven generator. Service: Twenty-four hours each day. Special rate for heating and cooking is 0.06 tael per unit, and the rate for light is 0.10 tael per unit. Current is sold through meters.

(2) Hanhow Waterworks & Electric Light Co. (Chinese); supplies light and power to the native city of Hankow. Present installation: Two 1,500-kilowatt turbo-generators. A third 1,500-kilowatt turbo-generator has been ordered; also a 2,500-kilowatt motor generator set to be used as reserve in connection with old power plant which is direct-current 440-volt. Plant modern in every way, new design, American make. System distribution: 2,300-volt, three-phase, 60-cycle, alternating current. Lighting system: 220-volt. Power system: 220/440-volt and 2,300-volt. Service continuous. Meters used. Plant successfully managed and operated by Chinese.

(3) Special Administrative District Electrical Works (formerly Melchers & Co.) own a small plant supplying current to the Special Administrative District, formerly the German concession. Capacity: 262½ kilowatts. System: Direct-current 3-wire 220/440-volts. Machinery: German. Plant operated and controlled by Chinese. Service continuous. Meters used.

(4) Taisho Electric Light Works (Japanese) supplies light to the Japanese concession. Capacity: 220 kilowatts. System: 220/440 volts, direct current. Machinery: Japanese. Operated and controlled by Japanese.

Wuchang.—Wuchang Electric Light & Power Co. (Chinese). Installation: 650-kilowatt alternating-current 50-cycle three-phase generator. Distribution system: 3,000 volts. Lighting system: 220-volt. No power system. Plant runs eight hours a day. Some meters used. Machinery: German. Plant managed by Japanese and Chinese. Capital: Japanese.

Arnhold Bros. & Co. (British) have obtained a franchise for a new electric light and power plant in Wuchang. The capacity will be 300 kilowatts.

Hanyang.—The Hanyang Iron & Steel Works has a 1,500-kilowatt plant. Most of the power is used for lighting the plant, but light is also supplied to Hanyang city to some extent. Machinery: American and British. Plant operated and managed by Chinese. System: 220/440 volts, direct current and alternating current, 3-phase, 50 cycles. Number of lamps operated: About 5,000.

Shasi.—Pu Chao Electric Light Co. has a 75-kilowatt 220-volt, direct-current plant. Machinery: German. Installation was completed in 1916. Plant operated by Chinese.

Ichang.—Kwang Ming Electric Light Co. has a 120-kilowatt plant. Distribution system: Three-wire 440-volt 220-volt. Plant is cheap secondhand German machinery. Controlled by Chinese. Installation was completed in 1914.

Wusueh.—Wusueh Electric Light Co. has a steam plant of about 60-kilowatt capacity. Machinery: American. Plant has been in operation a short time.

Sientaochen.—Sien-Han Electric Light Co. at Sientaochen has a small plant at 17½ kilowatt capacity; 220-volt crude-oil-engine drive. Machinery: American. Installation was completed in 1922.

HONAN PROVINCE

Kaifeng.—Kaifengfu Electric Light Co. has two 120-kilowatt, three-phase, 50-cycle, alternating-current, 2,300-volt, engine-driven generators. Engine and generators: German. Boiler: American. Plant operated by Chinese, and financed by Japanese capital. Distribution system: 2,300-volt. Lighting system: 220-volt. Some meters used. Plant operated nights only.

Chengchow.—Chengchow Electric Light Co. Present installation: 60-kilowatt, three-phase, alternating-current, 50-cycle, 2,300-volt, engine-driven generating plant. Machinery: British. The company has recently installed a new plant of American make, of a capacity of 144 kilowatts. System: 60-cycle, 2,300-volt distribution; consumers' supply, 220 volts. Plant operated by Chinese and financed by Japanese capital. Service nights only. Some meters used.

Houanfu.—Houanfu Electric Light Co. The plant, modern in every respect, was installed in 1922; it is of 75-kilowatt capacity. Alternating current, 2,300-volt, 50 cycles, engine driven, supplying 220 volts to consumers. Machinery: American. Plant financed and controlled by Chinese.

Sinyangchow.—Sinyangchow Electric Light Co. has a 60-kilowatt plant. All machinery secondhand.

KIANGSI PROVINCE

Kiukiang.—Kiukiang Electric Light Co. has two 45-kilowatt, alternating-current, 60 cycles, 2,300-volt, oil-engine-driven generators; consumers' supply, 100 volts. Machinery: American. Plant owned and operated by Chinese; commenced operation in 1919.

Nanchang.—Nanchang Electric Light Co. has a 300-kilowatt, direct-current, 220-440-volt plant. Machinery: American, supplied by a Japanese firm.

Pingsiang.—Pingsiang Colliery has a large power plant for mining and lighting purposes. Most of the power is used for power purposes. Current is 250-volt direct. Machinery: German.

WATERWORKS

Waterworks are established in Hankow and Hanyang in the Province of Hupeh, and at Kaifeng in the Province of Honan. The Hankow waterworks are owned by the Hankow Waterworks & Electric Light Co. and supply the Chinese city and the foreign concessions. No reliable information is available concerning the waterworks at Kaifeng and Hanyang, although they are considered inferior, in equipment, service, and purity of water, to the Hankow plant, which is probably the most modern and best in China. It was planned by a British engineer in 1908, and the machinery is British. The capacity is 5,000,000 gallons of filtered water per day.

TRAMWAYS

There are no street cars within the district. Lot holders in the foreign concessions object to the introduction of a tramway therein, and it is not thought that during the existence of the independent concessions any proposal could induce the concessions to admit street cars. However, Chinese capitalists believe that a line built behind the concessions could be made to pay, and they have recently applied to the provincial authorities for permission to construct a tram-

way to extend from Chiaokow, on the Han River, to Seven Mile Creek, on the Yangtze, a distance of 10 miles. It is reported that the enterprise is viewed with favor by the Chinese officials.

CONSERVANCY AND RECLAMATION WORKS

There are no conservancy and reclamation works under construction or projected at this time in the district. However, the question of improving the navigability of the Yangtze River from Hankow to its mouth has recently been considered by the Chinese Government, which established in 1923 a Commission for the Discussion of the Improvement of the Yangtze. It is composed of representatives of the Ministries of the Interior, Navy, Communications, the National Conservancy Board, etc. A technical committee was subsequently appointed, and the latter in turn organized a survey department to collect data and carry out a system of levels between Hankow and Woosung.

Under the supervision of the committee comprehensive surveys were made on the Yangtze, cross sections were taken at selected controlling points, and considerable information, including customs surveys, was gathered. In a comprehensive report on the question of Yangtze conservancy works, a prominent British engineer stated that the cost would be out of proportion to the benefits obtained and "utterly unremunerative and financially impossible."

IMPORT AND EXPORT TRADE

The following table gives the gross and net values of the trade of the port of Hankow alone for 1923 and 1924:

Imports and exports	1923	1924
Imports of foreign goods:	<i>U. S. currency</i>	<i>U. S. currency</i>
From foreign countries and Hongkong	\$31,731,908	\$49,159,739
From Chinese ports	30,021,042	32,825,626
Total foreign imports	61,752,950	81,985,365
Reexports of foreign goods:		
To foreign countries and Hongkong	106,878	14,736
To Chinese ports (chiefly to Changsha, Ichang, and Shasi)	13,862,890	15,322,948
Total foreign reexports	13,969,768	15,342,684
Net total foreign imports	47,783,182	66,642,681
Imports of Chinese products (chiefly from Ichang, Kiukiang, Shanghai, and Swatow)	64,030,665	69,381,652
Reexports of Chinese products:		
To foreign countries and Hongkong	3,746,494	4,123,259
To Chinese ports	24,075,426	27,180,636
Total Chinese reexports	27,821,920	31,303,895
Net total Chinese imports	36,208,745	38,077,757
Exports of Chinese products of local origin:		
To foreign countries and Hongkong	9,652,089	11,948,478
To Chinese ports	103,690,465	112,031,169
Total exports of local origin	113,342,554	123,979,647
Gross value of the trade of the port	239,126,169	275,346,664
Net value of the trade of the port	197,334,481	228,700,085

Exports (including reexports) from Hankow in 1903 were \$45,766,877; in 1913, \$68,886,689; and in 1923, \$141,164,474. Excluding reexports, the table below indicates the import and export trade of the principal ports of the Hankow district for the three years just mentioned and also for 1924:

Ports	1903	1913	1923	1924
EXPORTS				
Hankow.....	<i>U. S. currency</i> \$35,652,152	<i>U. S. currency</i> \$61,174,000	<i>U. S. currency</i> \$113,342,554	<i>U. S. currency</i> \$111,538,637
Ichang.....	876,682	2,246,955	2,283,400	1,952,822
Shasi.....	438,646	662,352	8,187,312	10,368,397
Kiukiang.....	7,483,969	11,480,726	25,221,748	28,364,808
IMPORTS				
Hankow.....	35,229,130	39,109,309	47,783,182	66,667,372
Ichang.....	1,070,840	1,364,055	1,341,645	3,104,572
Shasi.....	1,039,402	2,356,039	3,047,503	3,266,873
Kiukiang.....	6,635,137	8,976,877	11,268,188	11,455,289
TOTALS				
Hankow.....	70,881,282	100,283,309	161,125,736	178,206,009
Ichang.....	1,947,522	3,611,010	3,625,045	5,057,994
Shasi.....	1,478,048	3,018,391	11,234,815	13,635,270
Kiukiang.....	14,119,106	20,457,603	36,489,936	39,820,097

The following table furnishes a comparative statement of the principal exports (including reexports) from Hankow to all countries for the years 1903, 1913, 1923, and 1924:

[Quantities are stated in thousands of units given; values in thousands of United States dollars]

Articles	1903		1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Antimony.....pounds..	6,762	343	18,137	395	11,134	414	18,441	1,002
Beans.....do.....	258,202	2,472	235,181	2,846	144,846	2,743	234,354	6,087
Bean cake.....do.....	77,746	340	308,667	3,118	91,051	1,557	213,374	3,694
Bones.....do.....	3,821	11	14,543	101	30,146	261	24,502	213
Bran.....do.....	1,244	6	28,684	208	23,811	247	38,682	395
Bristles.....do.....	2,627	470	1,856	742	2,680	1,675	2,551	2,142
Chestnuts.....do.....	2,329	23	750	9	1,488	42	549	18
Chickens, frozen.....number			816	79	625	48	407	46
Cigarettes.....pounds..			4,206	972	9,881	5,412	9,758	5,681
Coke.....tons.....	2	10	18,939	59	1	11	2	16
Cotton, raw.....pounds..	44,653	3,856	29,917	3,885	149,477	35,634	174,671	44,494
Eggs:								
Fresh.....number.....	28,467	55	26,888	111	74,923	485	60,717	412
Frozen, dried, etc., pounds.	5,427	194	21,405	3,800	23,321	4,982	30,570	6,152
Flour.....do.....			42,478	912	11,443	339	23,342	694
Galnuts.....do.....	5,256	501	5,339	649	9,423	975	8,044	738
Groundnuts.....do.....			13,832	384	18,634	726	13,350	472
Hair, human.....do.....			300	76	879	159	573	152
Hemp.....do.....	21,618	1,076	71	6	14,127	1,252	19,522	1,703
Hides, buffalo and cow.....do.	18,596	2,304	34,534	6,700	13,613	4,571	19,264	3,374
Intestines.....do.....			411	91	1,219	637	1,441	776
Iron and steel.....long tons..	1	18	14	684	11	464	3	98
Iron ore.....do.....	51	66	270	451	341	614	381	752
Iron, pig.....do.....			4	72	1,100	275	3,804	4,956
Lily flowers.....pounds..	328	13	1,795	87	1,385	136	1,887	155
Oils, vegetable:								
Bean.....do.....	1,151	35	990	51	441	32	1,311	45
Sesame seed.....do.....	2,428	83	288	15	1,513	119	1,005	70
Wood and nut.....do.....	47,353	2,193	99,810	4,678	134,672	18,614	149,131	17,916
Tea.....do.....	2,830	97	896	55	1,977	151	1,295	93
Quicksilver.....do.....	29	13	43		32	22	47	30
Ramie.....do.....			25,108	2,041	20,625	2,182	18,253	1,788
Seeds, sesame.....do.....	68,615	1,196	185,392	6,080	131,474	5,245	23,876	482
Seed cake.....do.....			26,450	156	29,529	275	43,036	452
Silk cocoons, refuse, and waste.....pounds..	335	416	657	119	3,090	1,421	2,738	912

Articles	1903		1913		1923		1924	
	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value
Silk:								
Honan pongee.....pounds..	138	186	544	1,038	491	1,301	442	1,244
Raw yellow.....do.....	1,380	1,892	916	999	960	2,736	765	2,271
Silk products not otherwise classified.....pounds.....	317	487	-----	299	110	290	79	272
Skins:								
Kid and goat.....pieces.....	2,300	711	2,058	1,039	2,282	1,783	1,548	1,141
Sheep.....do.....	2,256	136	100	56	34	23	12	6
Tallow:								
Animal.....pounds.....	5,723	268	7,180	452	1,660	137	1,457	115
Vegetable.....do.....	26,492	1,306	33,216	1,915	23,181	1,659	28,078	1,949
Tea.....do.....	134,969	7,888	117,762	11,977	40,219	4,533	36,462	4,717
Tin.....do.....	36	6	211	32	161	44	138	35
Tobacco, leaf.....do.....	19,538	888	23,048	2,898	36,957	2,449	30,989	2,101
Walnuts.....do.....	1,061	35	874	34	1,855	148	2,069	150
Wheat.....do.....	19,238	159	28,228	419	3,844	89	129,428	2,743
Wool, sheep's.....do.....	3,307	197	268	15	191	21	168	19
All other articles.....	-----	15,813	-----	7,054	-----	30,704	-----	32,511
Total.....	-----	45,767	-----	68,887	-----	141,164	-----	155,284

The values of the declared exports from Hankow to the United States totaled \$725,691 in 1903, \$5,151,798 in 1913, and \$20,619,630 in 1923.

The net total import trade in 1903 was \$23,570,844; in 1913, \$39,109,308; in 1923, \$47,783,182; and in 1924, \$66,642,681.

The increase in imports is due to internal development in communications and industries rather than to any considerable change in the demands of the people. Progress has been made in the methods of distribution, with the result that there is a very great increase in the market for petroleum, dyes, cigarettes, sewing machines, and many articles of Japanese make, Japan having pushed its agencies farther inland than any other nation.

Nearly all imports destined for the interior are covered by transit passes. Articles universally used, like kerosene and cigarettes, are delivered by agents and are covered by transit pass to the consumer. The inland tax, known as likin, is a very great obstacle to the development of trade; the importer can not determine beforehand the total cost of an article delivered to a remote point, as it must pass numerous tax stations.

The following table shows the net quantity and value of the principal imports into Hankow for 1903, 1913, 1923, and 1924:

[Quantities are stated in thousands of units given; values in thousands of United States dollars]

Articles	1903		1913		1923		1924	
	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value
Automobiles and accessories.....	-----	-----	-----	-----	-----	74	-----	62
Bags, all kinds.....pieces.....	5,940	278	2,971	278	3,798	272	799	67
Belting, machine.....do.....	-----	19	-----	43	-----	90	-----	124
Building materials.....do.....	-----	94	-----	70	-----	131	-----	101
Buttons.....gross.....	322	96	218	69	183	30	185	52
Clocks and watches.....do.....	-----	31	-----	38	-----	61	-----	93
Coal.....tons.....	83	418	144	513	6	28	65	336
Confectionery.....do.....	-----	98	-----	147	-----	300	-----	25

Articles	1903		1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Cotton manufactures, total		13,453		13,514		12,004		14,745
Piece goods—								
American	933			259		33		29
Dutch	24			145		28		6
English	2,893			3,954		2,940		2,337
Japanese	36			853		1,738		3,530
Yarn, pounds	45,426	7,065	38,032	5,329	4,016	5,329	4,417	1,906
Crucibles						151		114
Drugs and chemicals		508		332		858		685
Dyes, paints, and varnishes, total		217		1,768		2,936		4,848
Aniline dyes	211			503		883		1,286
Indigo, artificial, pounds			7,336	1,166	6,709	1,847		3,262
Electrical materials		24		173		339		330
Flour, wheat, pounds	1,218	25	525	14	11,555	315		132
Fruit, canned and dried, do	191	10	331	38	694	90	976	115
Ginseng		89		93		114		197
Glass and glassware		109		238		279		265
Lamps and lampware		26		126		150		86
Leather, pounds		16		58		288		125
Lumber, all kinds		154		834		389		404
Machinery, all kinds		145		424		1,840		1,210
Matches, gross	98	16	1,317	265	38	8	159	36
Metals and minerals, manufactures, total		1,357		5,736		6,308		11,556
Brass and yellow metals, pounds	409	51	198	31	427	69	670	118
Copper ingots and slabs, pounds	5,413	581	14,129	2,396	21,977	3,362	51,198	7,300
Copper manufactures, pounds	251	29	204	34	119	31	274	60
Iron and steel, new, total, pounds	14,800	443	67,397	1,762	60,620	2,289	102,121	3,724
Bamboo steel, do	369	7	1,721	35	2,748	99	2,291	67
Bars, do	1,566	28	5,213	87	12,186	330	26,803	523
Cobbles, bar ends, etc., pounds	1,316	13	6,872	93	2,064	183	9,375	603
Hoops, do	516	8	3,647	80	5,253	183	5,781	159
Nails, do	4,738	96	8,403	190	5,131	208	16,790	611
Pipes and tubes, pounds	15	3	247	9	1,874	94	1,127	56
Plate cuttings, do	294	2	4,050	50	2,891	42	10,182	165
Rails, do			16,688	282			4,773	125
Sheets and plates, pounds	1,781	46	7,004	201	5,436	208	3,878	102
Timed plates, do	2,181	81	1,924	445	12,123	690	16,974	942
Wire and wire rope, pounds	1,360	40	5,051	99	6,382	182	3,148	140
Iron and steel, old, do	2,867	23	2,613	29	3,245	40	1,838	24
Hardware, tools, etc.		31		280		272		113
Lead, all kinds, pounds	2,817	85	751	30	2,709	149	2,530	151
Nickel, do	87	30	83	30	266	80	125	33
Tin slabs, do	245	54	290	44	89	38	419	63
Tin and lead foil, do	38	6	54	25	2,453	334	3,473	452
Milk, canned		9		32		92		87
Oil, mineral, total		1,839		2,505		4,424		6,601
Fuel oil				8		135		224
Kerosene—								
American								
Amer. galls.	3,506	471	14,482	1,200	15,022	2,641	25,482	5,569
Borneo, do			7,822	868		163		160
Russian, do	3,695	468	300	27		28	520	
Sumatra, do	7,807	883	2,903	322	5,536	1,430		
Lubricating, do		15			570	177		
Paper and stationery		90		312		869		1,372
Piece goods, miscellaneous		82		119		438		561
Railroad cars				310		10		726
Sandalwood, pounds	2,209	142	1,443	78	1,539	115	1,564	144
Soap		37		184		181		197
Spices, pounds	1,679	177	1,911	199	3,686	344	1,977	215
Sugar, do	27,524	625	100,538	2,764	72,528	5,670	172,125	6,602
Tobacco, total		45		915		2,488		3,841
Cigars and cigarettes, number		45		845	188,016	558	161,975	498
Leaf, pounds			405	70		1,930	10,919	3,346
Umbrellas, cotton, number	303	95	501	143	203	97	48	23
Wearing apparel		36		376		636		517
Wines		45		182		400		191
Woolen goods		619		310		666		925
Woolen and cotton mixtures		63		272		440		420
All other articles		2,435		5,568		2,857		8,370
Total		23,571		39,109		47,783		66,643

MONEY, BANKING, AND CREDIT

The chief banks handling foreign exchange and bills in Hankow are:

Banque de l'Indo-Chine (French).
 Banque Belge pour l'Etranger (Belgian).
 Banque Franco-Chinoise (successors to Banque Industrielle de Chine).
 Chartered Bank of India, Australia, and China (British).
 Chinese-American Bank of Commerce (American-Chinese).
 Crédit Foncier d'Extrême-Orient (Belgian).
 Deutsch-Asiatische Bank (German).
 Hongkong and Shanghai Banking Corporation (British).
 International Banking Corporation (American).
 Russo-Asiatic Bank (Russian).
 Sumitomo Bank (Japanese).
 Bank of Taiwan (Japanese).
 Yokohama Specie Bank (Japanese).

These banks transact exchange business and finance exports and imports, chiefly the former. Some of them afford special facilities to reliable exporters by providing credit, retaining a lien on the property when purchased.

The currency in circulation in Hankow consists chiefly of Hupeh and Yuan dollars, which have practically supplanted the Mexican dollar. The Hankow tael is usually employed in commercial transactions of large character.

The principal Chinese banks are the Bank of China, Bank of Communications, Bank of Agriculture and Commerce, and Bank of Canton; there are 17 others, but the four mentioned are the principal ones. These banks do little foreign-exchange business.

NOTE.—For details of currency, credits, and credit methods obtaining, see the special chapters in this handbook dealing with these subjects.

ADVERTISING ¹

Only 5 per cent of the Chinese in this district are able to read. Posters and handbills in bright colors and simple designs attract the curiosity and interest of people who can not read or afford newspapers. Electric signs are being used by several local merchants, foreign and Chinese, and it is believed that this is one of the most successful types of advertising for Hankow. All advertisements should be in both English and Chinese, as English is the language most commonly used by the foreign-educated Chinese as well as the more than 2,000 foreigners in Hankow.

There are no taxes on poster advertisements or handbills in the native city, but the French municipal authorities levy a small tax on handbills distributed in the French concession.

TRAVEL FACILITIES

Travel on the steamers of the Yangtze is comfortable and adequate. The railways and motor roads—where they exist—furnish fair accommodations; but generally throughout the district chairs must be used. The following is a list of European hotels in the dis-

¹ For details under this heading, see special chapter on "Advertising and merchandising."

trict, and, except as noted, the only other accommodations are native hotels and inns:

Names of hotels	Location	European or American plan	Nationality	Number of rooms	Rate per day
Wagon-lits Terminus Hotel.....	Hankow.....	Both.....	French.....	60	<i>Mex.</i> \$9.00
Hankow Hotel.....	do.....	do.....	Russian.....	14	5.00
International Hotel.....	do.....	do.....	do.....	6	4.00
Hôtel de France.....	do.....	do.....	Greek.....	6	4.00
International Hotel.....	Ichang.....	do.....	Italian.....	10	2.50
Duff Hotel.....	Kiukiang.....	do.....	British.....		4.00
Fairy Glen.....	Kuling.....	do.....	do.....		6.00
Kuling Hotel.....	do.....	do.....	do.....		6.00

Four lines of steamers maintain a regular river service between Hankow and Shanghai. The time is 70 hours, and practically every night one or more steamers sail. The down-river fare is \$50 Mex. and the round trip \$75. Throughout the year small steamers ply weekly from Hankow to Ichang (90 hours), the fare being \$45 Mex. During high water, approximately nine months of the year, steamer service to Changsha (48 hours), is maintained; fare, \$30 Mex. There is a daily railway service to Peking, first-class fare, including sleeper, being \$54 Mex.

The best time to visit Hankow is spring or autumn, to avoid extremes of temperature. A business trip may be in order at any time except from June to September.

TRADE ORGANIZATIONS

The following trade organizations exist in the Wuhan cities:

American Chamber of Commerce, Hankow.
 British Chamber of Commerce, Hankow.
 French Chamber of Commerce, Hankow.
 Japanese Chamber of Commerce, Hankow.
 Hankow Committee of Foreign Chambers of Commerce.
 Hankow Chinese Chamber of Commerce.
 Wuchang Chinese Chamber of Commerce, Wuchang.
 Chinese General Chamber of Commerce for the Wuhan cities (Hankow, Hanyang, and Wuchang), Hankow.

In addition to the above-named organizations, practically every recognized center of trade throughout the district has a chamber of commerce, and practically every native industry and activity in the district has its trade guild.

The Chinese and foreign chambers of commerce cooperate in measures for the common good and for the improvement of trade methods, both native and foreign.

PROPERTY VALUES AND RENTS

The most desirable office or residence location for foreigners is within the former German and Russian concessions of Hankow, now special districts under Chinese administration. The purchase prices of lots in these areas range from 3 to 4 taels per square foot.

Land may be freely purchased in any of the concessions except the British and Japanese. In the former, one alien may sell to an-

other, but no land transfer is permitted from a British subject to an alien. The Japanese concession is reserved exclusively for Japanese.

Residence rents range from 125 to 400 taels per month; office rents, from 200 to 400 taels; warehouse rates average 7 taels per square foot. Because of Hankow's rapid expansion and the large influx of foreigners, the housing problem at present is a serious one.

TAXES AND OTHER ASSESSMENTS

Each concession has its municipal council, which establishes rates and taxes within its boundary. Rates and taxes in the British concession for 1923—substantially the same as in the others—were as follows: Land taxes at the rate of 1 per cent on assessed value; 7 per cent property tax on the rental value of houses in foreign occupation; full concession lots in the original concession assessed for property tax upon a minimum of 3,000 taels; divided lots pay pro rata on a minimum basis of 3,000 taels assessed value per 234 fong (1 fong=10 square feet); in the concession extension the minimum basis is 2,000 taels per 234 fong, and bund frontage at 8 taels per foot per year. As a rule the landlord pays the taxes and the tenant pays the water rates.

The methods of leasing land in the treaty ports of this consular district depend upon the regulations of the various ports and, in certain instances, of the different concessions therein. Lands belonging to American citizens, firms, or associations in the foreign concessions of Hankow are registered in the consulate of the nation holding the concession and sometimes by special request also in the American consulate general. The position taken by the American office is that registration in the concession-holding consulate is sufficient and an additional recording in this office is superfluous, but all parties are told that their deeds will be recorded if desired. When the land is located in the concession extensions where the Chinese authorities continue to issue the title deeds and in the Chinese special administrative districts (the former German and Russian concessions), the deed is sent to the commissioner of foreign affairs for verification.

LIVING COSTS

The following table gives, in Mexican currency, estimates of living costs for one month:

	Hotel, board and room	Boarding house, board and room	Board	Rent	Esti- mated necessary living expenses
Single man.....	\$200	\$150	\$150	\$50	\$300
Single woman.....	200	150	150	50	300
Married couple.....	350	300	300	100	500
Married couple and 2 children.....	500	400	400	100	600

Recreation for foreigners is confined principally to those supplied by the various local, foreign, and international clubs, such sports as shooting and riding, and a few motion-picture theaters. The

British maintain a school in Hankow for foreign children, and there are also French and German primary and intermediate schools.

CHANGES IN TRADE CONDITIONS

Practically all the trade of West China, with its estimated population of 100,000,000, passes through Hankow, including the merchandise coming from and destined to Changsha, Chungking, Ichang, and Shasi. Approximately 11 per cent of China's total import and export trade is handled through this port.

The increase in exports has been remarkable. Notwithstanding the unsettled conditions which have existed during recent years, the value of shipments in 1924 reached \$155,283,542, as compared with \$141,164,474 in 1923, \$110,247,077 in 1922, and \$68,886,688 in 1913. The value of imports increased from the average of \$30,000,000 per annum in pre-war years to \$53,065,406 in 1922, \$47,783,182 in 1923, and \$66,642,681 in 1924. A certain amount of this advance has been due to the rise in values and appreciation of exchange, but the greater part is the result of a natural expansion of trade.

HONGKONG CONSULAR DISTRICT

By Consul A. E. Carleton

LOCATION, AREA, AND POPULATION

The Hongkong consular district comprises the island of Hongkong, Kowloon, and the New Territory, a total area of 390 square miles. Hongkong lies just south of the Tropic of Cancer and is therefore in the latitude of Cuba. Its average rainfall is 84.79 inches, average minimum temperature 68.2° F., and average maximum temperature 76.4° F. The rainy season is from April to September.

The population of Hongkong, including Kowloon, is estimated at 681,800. The Europeans number 14,963, Americans 537, and American business firms 30.

MANUFACTURING INTERESTS

There is practically no agricultural industry or mining of any importance in the Hongkong district. The manufacturing interests, in the order of their importance, are as follows (all values in Hongkong dollars):

Shipbuilding.—Hongkong & Whampoa Dock Co. (Ltd.), the capital of which is \$3,000,000, with a reserve fund of \$4,081,698.

Taikoo Dockyard & Engineering Co. (Ltd.); private concern. No statistics available.

Sugar refining.—Taikoo Sugar Refinery; private concern. No statistics available.

China Sugar Refining Co. (Ltd.), the capital of which is \$2,000,000, with a reserve fund of \$1,800,000.

Cement manufacturing.—Green Island Cement Co. (Ltd.), the capital of which is \$6,000,000, with a reserve of \$1,050,000. This company has two issues of shares, old and new, of \$7.50 each.

Rope manufacturing.—Hongkong Rope Manufacturing Co. (Ltd.), the capital of which is \$2,000,000, with a reserve of \$218,700. This concern has two issues of shares, old and new, of \$5 each.

Cigarette manufacturing.—Nanyang Bros. Tobacco Co. (Ltd.), the capital of which is \$15,000,000, with a large reserve fund.

Wine manufacturing.—There are 134 distilleries in the colony manufacturing Chinese wines of all kinds. These are all small concerns, and it is impossible to obtain any statistics regarding their output or number of employees.

Biscuit and confectionery manufacturing.—M. Y. San & Co. (Ltd.); capital, \$3,000,000.

Aerated-water manufacturing.—A. S. Watson & Co. (Ltd.). The capital this concern is \$1,200,000, with a reserve of \$450,000. This concern also does a large business in drugs and druggists' supplies.

Paper manufacturing.—There are four concerns manufacturing paper in the colony—one large factory at Aberdeen (on the opposite side of the island from Hongkong) named the Aberdeen Paper Mills, and three small concerns in Yaumati.

Gold and silver ware manufacturing.—There are 131 firms in the colony manufacturing gold and silver ware.

Glass manufacturing.—There are 19 glass factories in the colony. The goods manufactured by most of these concerns are of a very inferior quality, but some of the larger concerns are improving the quality of their output.

Rattan-furniture and bamboo-ware manufacturing.—There are 236 concerns manufacturing rattan and seagrass furniture. One of these is equipped with some up-to-date machinery, but the other concerns are small and most of the furniture manufactured by them is handmade.

Knitted-goods and hosiery manufacturing.—There are 52 small knitting factories, manufacturing a cheap grade of hosiery, singlets, etc.

Soap manufacturing.—There are 17 soap factories in the colony. Four of these concerns are fairly large, but the remainder are small.

Soy manufacturing.—There are 45 small Chinese concerns manufacturing soy.

Ginger and fruits, preserved.—There are 35 small concerns making a specialty of preserving and canning ginger, fruits, etc.

Lard manufacturing.—There are 15 lard factories in the colony, all under government supervision, which manufacture lard for export.

Jinrickisha manufacturing.—There are 26 small Chinese concerns in the colony manufacturing jinrickishas for use in the colony.

LABOR CONDITIONS

The following table indicates certain of the conditions with respect to labor:

Industries	Wages per day		Hours of work
	Male	Female	
	<i>Hongkong currency</i>	<i>Hongkong currency</i>	
Shipbuilding.....	\$1.50-\$2.00		9
Cigarette manufacturing.....	0.80- 1.20	\$0.40-\$0.65	10
Rattan-furniture manufacturing.....	1.50- 2.00	0.40- 0.60	10
Electric Tramway Co.....	1.00- 1.20		8
Contractors, engineers, builders, etc. ¹	1.00- 1.40		10

¹ Beard and lodging furnished.

Although 20 strikes occurred during 1923, difficulties in reaching settlements were, on the whole, much less than in 1922. The colony is not free from the activities of the professional agitator, but a spirit of reasonableness seems to be increasingly in evidence.

Hongkong government ordinances prohibit the employment of children under 10 years in any factory, the employment of children under 12 years in carrying coal or similar heavy tasks, and the employment of children under 15 years of age in the making of glass, fireworks, or in similar dangerous trades. Every factory in which children are employed must keep a record in English or Chinese of all the facts with reference to each child in its employ. The ordinances require one day's rest in seven and relaxation intervals of not less than five hours, and they limit employment to daylight hours.

TRANSPORTATION AND COMMUNICATION

RAILWAYS

The British section of the Canton-Kowloon Railway, the only line in the district, runs from Kowloon to Shumchun, a distance of 22½ miles, and was opened for traffic in 1910. The Chinese section, which was opened for traffic a year later, runs from Shumchun to Canton, 89½ miles. The British section is financed by the Hongkong government. Because of disturbed political conditions in and around

Canton in recent years, operation of railways has failed to show a profit. In 1923 the deficit amounted to about \$49,000 gold. In 1924 express service ceased from April 16 to the end of the year, and at the end of October all through traffic to Canton was suppressed.

The total expenditure on the line up to December 31, 1923, by the Hongkong government amounted to nearly \$17,000,000, and the number of local passengers carried in a normal year (1923) is in excess of 1,000,000. Fares and rates are:

Freight rates per ton per English mile:

First class—2.67 cents Hongkong currency.

Second class—2.23 cents.

Third class—1.78 cents.

Fourth class—1.34 cents.

Fares from Kowloon to Canton (about 112 miles):

First class—\$5 Hongkong currency, single; \$8 return.

Second class—\$2.50 single; \$4 return.

Third class—\$1.10 single; \$1.80 return.

ROADS

There are 227 miles of roads and streets in the Hongkong consular district, of which 138 miles are adaptable to motor transportation. Large sums are annually expended on the maintenance of roads and streets. Expenditure in 1923 amounted to more than \$1,500,000 gold. A similar sum is to be spent during the coming year for improving roads and bridges.

Traffic consists of motor trucks fitted with pneumatic tires, motor trucks fitted with solid tires, automobiles, motor busses, taxicabs, rickshas, sedan chairs, electric street cars, and a few modern two-wheeled carts drawn by mules or coolies and owned by the military and sanitary authorities. Trucks fitted with pneumatic tires are limited to a load not exceeding 12 tons in the city and 5 tons in the suburbs, while trucks fitted with solid tires are limited to a load of 7 tons in the city and 5 tons in the suburbs.

No fees or tolls are collected in Hongkong.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The cable service out of Hongkong depends directly or indirectly upon three companies—the Great Northern Telegraph Co., a Danish corporation, which in normal times connects with Europe by way of Siberia; the Eastern Extension Telegraph Co., a British corporation, which connects with Europe by way of Suez; and the Pacific Commercial Co., an American corporation, which has no direct connection at Hongkong but transmits messages to the United States by way of Manila. There is also the Chinese Government's land service, which transmits messages not only over China and to India but to other countries by connecting cables at Shanghai or elsewhere.

There is a commercial wireless station at Cape D'Aguilar, called VPS, owned by the government; wave length, 600; radius, 350–800 miles. The British Navy has a wireless station at Stonecutters Island, Marconi system; call letters are BXY; time signal on 2,000 meters at 1256 and 0156 Greenwich mean time. Visiting men-of-war get radio schedule. Weather reports are broadcast on 600 meters at 0500 and 0900 Greenwich mean time. The time ball is dropped

on Kowloon signal hill at 10 a. m. and 4 p. m., the time for the ball being obtained from Hongkong Observatory. VPS broadcasts weather reports on 600 meters at 0500 and 0900 Greenwich mean time. Storm warnings are broadcast each even hour until midnight. No press news is sent from Hongkong.

TELEPHONES

The China & Japan Telephone Electric Co. (Ltd.), a private company incorporated in the United Kingdom, operates three exchanges in Hongkong with a total of 6,500 subscribers. The equipment is of magneto type, of Swedish manufacture.

This company owns the following cables, etc., in Hongkong:

	Miles
Telephone routes, aerial.....	27.38
Underground armored cables.....	38.70
Underground cables in ducts.....	11.45
Underground ducts.....	15.86
Cables crossing the harbor.....	1.99
Conductors:	
Aerial, single line.....	1,553.69
Submarine, single line.....	104.55
Underground, single line.....	13,821.90

Telephone rates vary from £10 per annum for telephones installed within a mile of the city to £25 for telephones in the Peak and Kowloon districts. There is also a charge of £3 to £10 for every extension.

POSTAL FACILITIES

The annual report of the Postmaster General of Hongkong for 1923 shows a steady increase in the postal business with the United States, particularly in remittances from Chinese in the United States to relatives and firms in the Hongkong trade district. A report of the Chinese branch of the Hongkong Post Office shows that Chinese registered articles delivered by the branch during the year 1923 amounted to 274,076, of which Chinese registered letters from the United States and from Canada accounted for 171,572. The registered articles were almost exclusively remittances of money from the United States to this district. Previous to the war these remittances amounted to something over \$40,000,000 gold. A Hongkong banker estimates that they amounted to more than \$50,000,000 gold in 1923, which is probably correct, since the registered articles received during 1923 show an increase of 20 per cent over those received during the two years previous to the war.

Owing to the closing of the British postal agencies in China there were decreases in the number of mail receptacles dispatched from Hongkong and in transit receptacles handled as compared with 1922.

A total of 5,298 steamers carrying mails arrived in 1923, and 8,364 left—an increase of 701 and 2,000, respectively, over the previous year's figures. The total revenue from the postal service in 1923 amounted to \$714,340, against \$662,862 in 1922—an increase of \$51,478. The balance of revenue over expenditures amounted to \$622,700.

SHIPPING AND WAREHOUSING FACILITIES**HARBOR FACILITIES**

Nearly all of the large passenger and freight vessels entering this port berth alongside the wharves of the Hongkong & Kowloon Wharf & Godown Co. (Ltd.), in Kowloon. Smaller-sized vessels are usually moored to buoys in the eastern and western portions of the harbor (all of these buoys being owned and controlled by the government), while vessels belonging to large steamship companies, such as the Blue Funnel Line; Standard Oil Co.; Jardine, Matheson & Co.; Osaka Shosen Kaisha; and Douglas Steamship Co., berth alongside their own wharves on the Hongkong and Kowloon sides of the harbor.

The average depth of water at high tide is 34 feet and at low tide about 23 feet. Tides rise at ordinary springs 9 feet and at ordinary neaps 6 feet.

Cargo is transferred from ship's tackle to port of steamers lying alongside the wharves by means of trucks on light railways, steam cranes for hoisting, and coolie labor.

But in transferring cargo from ship's tackle to port of ships moored to buoys in the harbor, lighters, junks, and coolie labor are employed, the lighters and junks being towed by steam launches.

The total tonnage entered and cleared during the year 1923 amounted to 53,402,239, as compared with 46,566,764 tons in 1922 and 43,420,970 in 1921.

DOCK ACCOMMODATIONS

In Hongkong there are two large shipyards with large modern dry dock and slipway conveniences; a third of considerable facilities for handling larger business; a fourth yard with an old dock which formerly served the port as its sole dry dock; a fifth concern with slipway facilities; and 21 boat-building establishments. The latter are Chinese concerns in which boats of foreign model are manufactured almost entirely by hand. Their annual output of small boats of all kinds is a considerable feature of the port's industry.

The Taikoo Dockyard & Engineering Co. (Ltd.) covers an area of 55 acres and is situated on the island of Hongkong just inside the northern and deeper entrance to the harbor. The works are equipped for modern ship and marine-engine construction and repairs and for overhauling all types of vessels, including warships, both in dry dock and on slipway. During 1923 the firm constructed five ocean-going vessels of 4,711 gross tons and of 3,120 indicated horsepower, as compared with seven vessels constructed in 1922 of 11,087 gross tons and of 8,550 indicated horsepower.

The largest dock possessed by this company is 787 feet extreme length; 750 feet on entrance at top; 120 feet wide at coping; 77 feet 6 inches at bottom; 88 feet width of entrance at top; 82 feet width of entrance at bottom; 34 feet 6 inches depth over center of sill at high-water spring tides; 31 feet depth over side of sill at low-water spring tides. It can be filled in 45 minutes and pumped out in 2 hours and 40 minutes.

The Hongkong & Whampoa Dock Co. (Ltd.) was established in 1863, and represents a development from an establishment of mud docks at Whampoa, on the Pearl or Canton River, in the earliest days

of the steamship business in the Far East. They are at present dock proprietors, shipbuilders, boilermakers, marine and brass founders, forge masters, electricians, iron and brass founders, forge masters, electricians, and engage extensively in the manufacture of railway equipment for Chinese railways and local tramways.

The principal works of this firm are at Hunghom on the Kowloon side of Hongkong Harbor, about 2 miles distant from the city of Victoria. The shipbuilding yard has a frontage of 570 feet and will admit of ships 500 feet in length being laid down. The company also possesses a twin-screw salvage steamer fully equipped with a complete plant of powerful salvage gear and tools.

During the year 1923 the Hongkong & Whampoa Dock Co. (Ltd.) constructed five vessels of 9,577 gross tons and 7,680 indicated horsepower, as compared with six vessels of 11,842 gross tons and 7,300 indicated horsepower in 1922. The No. 1 dock of this company is 700 feet in length, 86 feet in breadth at entrance at top and 70 feet at bottom, and 30 feet depth of water over sill at ordinary spring tides.

CARGO-HANDLING FACILITIES

The Hongkong & Kowloon Wharf & Godown Co., in Kowloon, operates five large piers, capable of berthing the largest vessels entering the Hongkong port. The piers are equipped with 10 locomotive cranes of 5-ton capacity, 1 of 15-ton lifting capacity, and 1 of 25-ton capacity. From 20 to 25 tons of general cargo can be discharged per hour per hatch.

Most cargo arriving in the larger freight and passenger vessels is discharged alongside the wharves of the above-mentioned company and stored in its warehouses (godowns). Cargo from smaller vessels and coasting vessels, which are moored to buoys in the harbor, is discharged into junks or lighters, and usually transferred to godowns in the western part of Victoria (the European city of Hongkong).

The minimum depth of the water at the wharves of the Hongkong & Kowloon Wharf & Godown Co. is 29 feet at dead low water at lowest spring tides, which at ordinary low tide represents a depth of 31 to 32 feet.

WAREHOUSING AND STORAGE FACILITIES

Warehouses are on the water front and are connected with wharves by light railways. They are built of reinforced concrete, of brick and stone, with tiled roofs, and have a capacity of 300,000 tons of 40 cubic feet. The charge for warehouse space on ordinary goods is \$0.70 Mexican per ton of 40 cubic feet, or \$1 Mexican per ton of 2,240 pounds. Cargo transit through all its phases from ships' side to storage may be effected by the use of cranes and light railways, or wholly by coolie labor.

Iron, timber in the log, and dangerous acids in jars are the principal goods stored in the open. Because of dampness, iron is stored in the open only when there is no available covered space. The chief danger to cargo in storage is from white ants, which attack and breed in softwood packing cases and packing which absorbs moisture. To guard against these pests, cargo is stored, where possible, on granite blocks, with air passages under the packages.

Consignees and dealers employ their own labor when taking delivery of cargo.

PUBLIC UTILITIES

ELECTRIC-LIGHT COMPANIES

The Hongkong Electric Co. (Ltd.) supplies light and power on the island of Hongkong, and the China Light & Power Co. (Ltd.) supplies Kowloon. Both are British. The lighting load of the first named is 5,000 kilowatts of connected load, and the power load is 2,800 kilowatts. The lighting and power load of the China Light & Power Co. is 4,000 kilowatts.

Both companies have recently made extensive alterations and additions to their plants, estimated to satisfy the needs of the colony for many years. Nearly all the equipment is British, but certain parts were purchased from the Westinghouse people in the United States during the war.

The capital of the Hongkong Electric Co. is \$3,000,000 Hongkong currency, all paid up, and that of the China Light & Power Co. is \$3,000,000 Hongkong currency, of which \$2,200,000 has been paid up.

WATERWORKS

All waterworks in the colony of Hongkong are owned and operated by the government. There are five reservoirs on the island of Hongkong and one in Kowloon—the largest, Tytam Tak, having a capacity of 1,419,000,000 gallons. The total capacity of the six reservoirs is 2,539,000,000 gallons. Water is supplied to residents through meters at 50 cents Hongkong currency per 1,000 gallons; water to ships in the harbor at 50 cents Hongkong currency per ton. All equipment in the pumping plants, the workshops, the hydraulic dam and distribution system, engine house, etc., is British.

Various large schemes for the purpose of increasing the water supply of the colony are still in hand and, when completed, will provide Hongkong and Kowloon with an abundant supply of water all the year round. These schemes involve an expenditure of about \$2,000,000. More than half of this amount is to be expended on the construction of two tunnels (or water flumes) in Kowloon, 2,160 feet and 4,680 feet in length, respectively, and an open conduit 2,000 feet in length, connecting the two tunnels and other contingent works. The work is expected to be completed in about 18 months, and will add about 17,000,000 gallons to the colony's daily water supply. The contract for this latter scheme has been let to a British company.

TRAMWAYS

There are two tramways in Hongkong, the Peak Tramway Co. (Ltd.) and the Hongkong Tramways Co. (Ltd.). Both are British companies. The former line is a cable tramway constructed in 1888 and running from Garden Road, near St. John's Cathedral, to the Peak. Its capital is \$300,000 Hongkong currency, and it pays an annual dividend of about 15 per cent. No extensions are contemplated at present, but it is understood that if a new line is to be laid electric trams will take the place of the old ones.

The Hongkong Electric Tramway Co. runs through the city of Victoria from Belchers Bay to East Point and Happy Valley; and

thence on to the village of Shaukiwan, a total length of about 10 miles. This concern has a paid-up capital of \$1,625,000 and pays an annual dividend of about 30 per cent. The passengers carried per month number approximately 2,000,000, and no extensions are at present contemplated.

RECLAMATION PROJECTS

Progress is being made in connection with the reclaiming of about 90 acres of the Praya East foreshore with materials obtained from cutting down and removing Morrison Hill. The foreshore to be thus improved is a densely populated district within easy reach of the business section of the city of Victoria, and the improvement will make it susceptible of considerable commercial development. There will be mooring rings for junks on the shore front and several public piers.

A part of the area made available by the removal of Morrison Hill will be set aside for recreation grounds, and about 9¼ acres will be made available for building purposes.

Other reclamation schemes in hand at Hongkong include the filling in of a portion of the foreshore at North Point, at which will be erected warehouses with provisions for berthing accommodations in front of certain lots by reinforced concrete wharves; the filling in of a tidal flat and the reduction of a hill between Taikoktsui and Fuktsunhoung on the mainland; the reclamation of areas at Kowloon Bay West and at Samshuipo (a popular Chinese residential part of the mainland), and a further reclamation of about 20 acres at Kowloon Bay East to provide more permanent accommodations for the formation of junk building and repair yards. All these reclamation schemes are under government direction, but are being carried out chiefly by private enterprises.

IMPORT AND EXPORT TRADE

According to the American consulate general at Hongkong, the grand total of imports and exports of merchandise at Hongkong for 1924 was £145,727,077, the imports being £75,055,085 and the exports £70,671,992. This represents an increase over 1923 of £10,329,499. Excluding treasure in 1924, the actual trade reached the sum of £135,830,272, or greater than in 1923 by £12,503,443.

In tabulated form the trade may be stated as follows:

Item	Merchandise (excluding treasure)	Treasure	Total
1923:			
Imports.....	£61,954,498	£2,798,360	£64,752,858
Exports.....	61,372,331	9,272,389	70,644,720
Excess of imports.....	582,167		
Excess of exports.....		6,474,029	5,891,862
1924:			
Imports.....	72,155,478	2,899,607	75,055,085
Exports.....	63,674,794	6,997,198	70,671,992
Excess of imports.....	8,480,684		4,383,093
Excess of exports.....		4,097,591	

The excess of imports over exports in 1924, amounting to more than £3,000,000, represents generally goods in warehouses incurring cost by storage and interest charges. In normal years the import balance averages about £1,000,000, according to official returns—this disparity indicating the extent to which trade has been hindered by troubles in South China. A noteworthy feature is the diversion of traffic from Canton as a result of the increasing political unrest there. Cargo to the value of about £2,000,000 has been shipped from Hongkong directly to districts that were formerly served from Canton. Shipments by the Canton-Kowloon Railway to Canton fell in 1924 to £26,143; in 1923 they had been £800,000.

The table below shows the destination and origin of merchandise handled at the port of Hongkong during the year 1923:

Regions	Exports	Imports	Total
United Kingdom	£797, 778	£6, 974, 513	£7, 772, 291
British dominions and possessions	7, 164, 800	6, 357, 912	13, 522, 712
China	44, 814, 416	9, 780, 816	54, 595, 232
Japan, Korea, and Formosa	3, 592, 627	6, 674, 896	10, 267, 523
Other foreign countries	14, 275, 039	34, 964, 721	49, 239, 760

As regards exports, the following table shows, for the five principal items, the estimated percentages in the year 1923 for the destinations listed:

Articles	To other Chinese ports	To Japan	To United Kingdom	To United States
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Rice (white)	88	2	—	3
Sugar (refined)	9	40	20	1
Yarn (cotton)	52	—	—	—
Rice (broken)	78	22	—	—
Kerosene	91	8	—	—

Rice is the principal item of export, being followed closely by sugar. The bulk of the rice shipments consists of imported stock from Indo-China. Sugar supplies are secured principally from the Dutch East Indies. Kerosene, which is imported from the United States and the East Indies, ranks third in importance. Cotton yarn is another important export. Practically all the yarns shipped are the manufactures of North China, Japan, and the United States.

Rice, sugar, cotton yarn, and kerosene are the leading articles of import, forming also (as just indicated) the principal items of export from the colony.

CHANGES IN TRADE OF HONGKONG DURING PAST DECADE

Before the war the value of exports handled by Hongkong averaged about £28,000,000 per annum. Notwithstanding unsettled conditions from a military and political standpoint throughout China, the total value of the export in 1924 was £63,674,794.

The imports increased from an average value of £27,000,000 per annum in pre-war years to £72,155,478 in 1924. These increases

have been remarkable, the larger proportion being due to the natural expansion of trade.

The total trade of Hongkong in the years 1913, 1921, 1922, 1923, and 1924, including treasure, was as follows:

Years	Total value	Imports	Exports
1913.....	£55,000,000	£28,000,000	£27,000,000
1921.....	135,834,936	68,143,059	67,691,877
1922.....	122,191,827	61,213,363	60,978,464
1923.....	123,326,829	61,954,498	61,372,331
1924.....	135,830,272	72,155,478	63,674,794

The following table gives the vessels which entered and cleared from the port of Hongkong during the different years mentioned:

Years	Number of vessels (including junks and steam launches)	Net tonnage
1913.....	489,734	37,742,982
1921.....	672,681	43,420,970
1922.....	708,244	46,566,764
1923.....	778,222	53,402,239
1924.....	764,492	56,731,077

The American tonnage in the port of Hongkong in 1913 was 290,967; in 1923 this had increased to 1,421,962, while in 1924 the American tonnage was 1,423,490.

MONEY, BANKING, AND CREDIT

BANKS

The following is a list of the principal Hongkong banks:

Banks	Nationality	Head office	Capital	American branches, agencies, or correspondents
P. & O. Banking Corporation.	British.....	London.....	£5,000,000 authorized; £2,594,160 paid up	National Bank of Commerce, New York (agent).
Hongkong & Shanghai Banking Corporation.	do.....	Hongkong.....	\$50,000,000 Hongkong currency authorized; paid up to \$20,000,000.	New York branch.
Chartered Bank of India, Australia, China.	do.....	London.....	£3,000,000 paid up	Do.
Bank of Taiwan.	Japanese.....	Taipeh.....	60,000,000 yen subscribed; paid up to 52,488,425 yen.	Do.
Mercantile Bank of India (Ltd.).	British.....	London.....	£3,000,000 authorized; £1,050,000 paid up.	Do.
Banque de L'Indo-Chine.	French.....	Paris.....	72,000,000 francs subscribed; 68,400,000 francs paid up.	J. P. Morgan & Co., French American Banking Corporation, Guaranty Trust Co. (New York agents).
Bank of East Asia.....	Hongkong Chinese.	Hongkong.....	\$10,000,000 Hongkong currency authorized; \$5,000,000 paid up.	New York agent: American Express Co.
Yokohama Specie Bank.	Japanese.....	Yokohama.....	100,000,000 yen authorized and paid up.	New York branch.

Banks	Nationality	Head office	Capital	American branches, agencies, or correspondents
Nederlandsche Handel Maatschappij (Netherlands Trading Society).	Dutch.....	Amsterdam.	150,000,000 guilders authorized; 80,000,000 guilders paid up.	Irving Bank, Columbia Trust Co., New York (agents).
Bank of China.....	Chinese.....	Peking.....	\$60,000,000 authorized; \$18,278,600 paid up.	New York bankers: Irving Bank, Columbia Trust Co., Equitable Trust Co.
Russo-Asiatic Bank.....	Russian.....	Paris.....	55,000,000 rubles paid up; capital subscribed, Chinese Government, 3,500,000 taels.	National City Bank of New York, Union Trust Co. of San Francisco (agent).
Industrial & Commercial Bank (Ltd.).	Hongkong Chinese.	Hongkong..	\$5,000,000 authorized; \$795,795 paid up.	American Express Co., Harriman National Bank, New York agents.
Nederlandsch Indische Handels Bank.	Dutch.....	Amsterdam.	60,000,000 guilders authorized; 55,000,000 guilders paid up.	Bankers: San Francisco, Crocher National Bank, Bank of Italy, Anglo and London, Paris National Bank; New York, Farmers Loan & Trust Co., Goldman Sachs & Co., Chase National Bank.
International Banking Corporation.	American..	New York..	\$5,000,000 fully paid.....	San Francisco branch.
American Express Co. (Inc.).	.....do.....	.....do.....	\$6,000,000, fully paid.....	
Bank of Canton.....	Hongkong Chinese.	Hongkong..	£1,200,000 authorized; £1,066,520 paid up.	New York branch; Canton Bank, San Francisco, agent.
Ho Hong Bank (Ltd.).....	.....do.....	Singapore..	\$20,000,000 authorized; \$4,000,000 paid up.	Agents: New York, Farmers Loan & Trust Co.
National Commercial & Saving Bank (Ltd.).	.....do.....	Hongkong..	\$5,000,000 authorized; \$2,400,000 paid up.	No New York agent.
Oriental Commercial Bank (Ltd.). ¹	.....do.....	.....do.....	\$5,000,000 authorized; \$1,500,000 paid up.	New York agents, National City Bank of New York; San Francisco, Union Trust Co.
Banque Franco-Chinoise.	French.....	Paris.....	10,000,000 francs authorized; 2,500,000 francs paid up.	Irving Bank, Columbia Trust Co., New York agents.
Equitable Eastern Banking Corporation.	American..	New York..	\$2,000,000, fully paid up.	Subsidiary of Equitable Trust Co.

¹ Went into liquidation June 15, 1926.

FINANCING OF EXPORTS FROM UNITED STATES TO HONGKONG

Exports from the United States to Hongkong are financed by letters of credit or by bills of exchange. In the former case the Hongkong buyer opens a credit at his local bank which contains a complete statement of the conditions on which it may be drawn against. Drafts drawn by the American exporter against such a letter of credit must usually be accompanied by the bill of lading and insurance policy, and may be negotiated through any local bank in America, which of course must be careful that all the conditions specified in the letter of credit have been complied with. The usance generally varies from eight to four months.

The other principal form of payment is by bill of exchange. In such cases the American exporter sends the draft, bills of lading, and insurance policy direct or through the mediation of his local banker to a Hongkong bank. If the transaction is D/A (documents on acceptance) the Hongkong bank delivers the documents to the Hongkong importer on his acceptance of the bill of exchange. If the transaction is D/P (documents on payment) the Hongkong bank delivers the documents on payment of the bill of exchange.

It is the consensus of opinion among local bankers that letter of credit in the usual cases is superior to the bill of exchange as a method of financing imports and exports. General bills of exchange should be used when one is confident concerning the financial standing and the reliability of the local purchaser. The weakness of the bill of exchange is that the drawee, if he is not responsible, will refuse acceptance if the market has gone against him. If shipment has been made against confirmed letters of credit this contingency does not arise. On the other hand, an importer will not open a letter of credit unless he feels assured as to the integrity of the seller, since by doing so he is subject to the risk of paying for goods which do not meet specifications. Generally, it is good policy for the American exporter or manufacturer dealing with the Hongkong market to require confirmed letters of credit. If the local business is in a good financial position it should experience no difficulty in opening the required credits through its local bankers.

POWERS OF ATTORNEY

All functions must be expressed in a power of attorney. None are implied under the laws of Hongkong, except such as are obviously ancillary to the powers expressed. No translation of a power of attorney is called for in Hongkong. English is the language of the colony. There is no registration of powers of attorney in Hongkong. They are private documents, as between the grantor, the attorney, and the party with whom the attorney deals. In case of cancellation, if the grantor of a power of attorney can not rely on the attorney's acting on his cancellation he should communicate with his consul or some one else in Hongkong requesting him to notify the attorney and to advertise the cancellation. There is no official method by which a power of attorney can be canceled. A power of attorney prepared in accordance with usage in the United States is valid without regard to form, provided it was duly authenticated, but it would be subject always to the necessity of proving that the form was in accordance with such usage.

CURRENCY AND COINAGE

The principal coins current in the colony of Hongkong are the Hongkong silver dollar, the Mexican dollar, and the "British dollar," all of approximately equal value. The dollar contains 100 cents. Subsidiary coins include 50-cent, 20-cent, 10-cent, and 5-cent pieces, all of silver, and a copper 1-cent piece. The mint par value of the Hongkong dollar in United States currency is 47.77 cents (on the basis of the average value of silver in 1913). The exchange rate quoted at the end of June, 1926, was 55.16 cents.

The silver dollar is legal tender to any amount, subsidiary silver coin up to \$2, and copper cents up to \$1.

No estimate can be given as to the number of silver dollars in circulation. Of subsidiary coin there is more than \$17,814,000. The colonial government has no paper money in circulation, but that put out by private banks may be estimated at nearly \$59,000,000.

ADVERTISING AND MERCHANDISING¹

The newspaper, the illustrated poster, and the cinema are all valuable mediums for introducing foreign-made goods to the Chinese public, and all three are now being employed with success by firms in Hongkong and South China. If the object is to reach the Chinese masses directly, advertising by illustrated posters is preferable on account of the prevailing illiteracy.

Another form of advertising adopted by some firms is the distribution gratis of novelties, such as fans, pictures, small mirrors, paper flags, aeroplanes, etc., containing advertising matter. These are eagerly sought after and prized by the Chinese population. Chinese calendars are also distributed by the larger firms in Hongkong about Chinese New Year. They are very artistic, generally being in 10 colors, size 20 inches by 30 inches, and are lithographed on chrome paper, with brassed top and bottom. The calendars cost about 18 cents Hongkong currency per copy for an order of not less than 10,000 copies, and are eagerly sought by the Chinese.

Local firms are of the opinion that advertising pays if conducted in proper lines, but that it will not pay unless there is a close follow up. The mere publication of advertisements is a waste of time and money. Circulars and pamphlets sent by mail are of little use except for articles that find a market among Europeans, and even then the "personal touch," through a local representative, would be more likely to bring results.

The following is a list of the local newspapers of importance, together with their advertising rates, in United States currency:

The Hongkong Telegraph.—Established in 1871; formerly American-owned, but now controlled by local British interests. It is printed in English and is published daily except Sunday. It has a circulation of about 3,000. The average number of pages is 12; each page is 15 by 22 inches, with columns 2¼ inches wide and 20 inches in length.

The monthly quotations per column inch, in United States currency, are: Daily insertion, \$3.50; alternate days, \$2.20; twice weekly, \$1.75; once weekly, \$0.90; once monthly, \$0.60. The usual discount of 20 per cent is allowed advertising agencies.

The South China Morning Post.—One of the leading newspapers in South China. Established in 1903 and controlled by the proprietors of the Hongkong Telegraph; printed in English, published daily except Sunday. Circulation estimated to be about 4,000. Subscription, \$36 Hongkong currency per year. Average number of pages 14, with seven columns, 2¼ inches in width and 20 inches in depth, per page. Contract advertising rates per single column inch per month are: Daily, \$3.12 United States currency; alternate days, \$1.87; twice weekly, \$1.56; once weekly, \$0.94.

The following discounts are allowed for prepayment of whole amount: For three or six months, 5 per cent; for 12 months, 10 per cent.

The rate for a full page is \$72.80 per insertion; half page, \$36.40 per insertion; quarter page, \$18.20 per insertion.

The Hongkong Daily Press.—Established in 1847; one of the oldest newspapers in the colony. Printed in English and published daily except Sunday. Circulation estimated at about 3,000. Subscription, \$36 Hongkong currency per annum. The average number of pages is 10; size of page 17½ by 22½ inches; number of columns, 6; width of column, 2 5/6 inches; length of column, 20 inches. Special inducements are offered foreign advertisers by special flat rates, which are a matter of arrangement.

¹ See special chapter on this subject.

The China Mail.—Published in English. Established in 1845 and the oldest newspaper in the colony. Annual subscription, \$36 Hongkong currency per annum. Estimated circulation, 2,500. Advertising rates, about \$3.12 United States currency per inch per month.

The circulation of English newspapers in Hongkong is based on a foreign population of about 30,000 people, about 23,000 in Hongkong and its garrisons and the rest among the foreign residents of Canton, Swatow, Amoy, Foochow, Wuchow, and other treaty ports. The native newspaper circulations are based upon a population of about 600,000.

TRADE ORGANIZATIONS

Trade organizations include the Hongkong General Chamber of Commerce, the Chinese Chamber of Commerce, and the Association of Exporters and Dealers of Hongkong.

The nature of the services rendered by the Hongkong General Chamber of Commerce may be summarized as follows: (1) Arbitration; (2) metal and sundries; (3) insurance; (4) trade-marks; (5) piece goods; (6) inland trade; (7) language school.

PROPERTY VALUES AND RENTS

Property values have fluctuated recently and are more or less inflated because of the influx of rich Chinese from Canton.

The value of land in the business center of the colony at present is from \$65 to \$80 per square foot; in the European reservation on the Peak, \$1 per square foot; in Kowloon, from \$4 to \$8 per square foot; and in the outlying districts, from \$2 to \$4 per square foot.

The rent for office space varies considerably, depending on the age and construction of the building, the facilities for entering it, and the conveniences attached thereto. For instance, office space covering 2,800 square feet in a new up-to-date reinforced concrete building, with all modern conveniences, was recently offered at an annual rental of \$8,160 Hongkong currency. A similar amount of office space in an older building could probably be obtained for \$5,000 Hongkong currency per annum.

TAXES AND ASSESSMENTS

Taxes are charged by the government at the rate of 13 per cent on the rental of all houses and offices, etc., and are payable to the government quarterly, in advance.

Crown rent is also payable to the government in respect of all land owned by individuals and corporations, and amounts to approximately \$300 per acre. In some locations it may be a little more.

During the period 1914 to 1923 the assessments of the whole colony rose from \$14,410,103 to \$21,059,700, an increase in ratable value of \$6,649,597.

LIVING COSTS

The following table indicates ordinary living costs in Hongkong hotels and boarding houses:

	Board and room, per month	
	Hotel	Boarding house
	<i>Hongkong currency</i>	<i>Hongkong currency</i>
Single man.....	\$450	\$275
Single woman.....	450	275
Married couple.....	800	450
Married couple and 2 children.....	1,000	550

The managers of the large commercial firms, heads of the various branches of the local government, and other principal residents nearly all reside on the Peak. At present, however, suitable houses are difficult to obtain, and, when they are obtainable, it is usually only for a few months while the owner is away on leave. The annual rent of a suitable furnished house on the Peak is about \$3,600 Hongkong currency. The annual cost of light is about \$250 Hongkong currency, and coal for fireplaces costs \$240 Hongkong currency. The cost of transportation to and from the Peak per annum by the Peak Tramway would be \$144 Hongkong currency for a man, \$108 for a woman, and half rates for children.

Transportation in the colony is by ricksha, chair, or automobile. The roads are excellent for motoring, and there are about 1,230 automobiles in the colony, nearly all American. There are no carriages or other horse-drawn vehicles in Hongkong. Motor-car hire in Hongkong costs \$4 Hongkong currency per hour for a small car and \$6 for a large car. Half rates are charged for waiting.

European and American children are usually sent home to be educated.

The principal clubs are the Hongkong Club, the Royal Hongkong Golf Club, and the Peak Club. The chief forms of sport in the winter are golf and tennis. In summer the principal recreation is swimming.

MUKDEN CONSULAR DISTRICT

By Vice Consul W. F. Nason

LOCATION AND AREA

The Mukden consular district comprises most of Shengking, or Fengtien (the southernmost of the three eastern, or Manchurian, Provinces), and the southern portion of Kirin Province. Lying between 40° and 44° N., it corresponds in latitude to Pennsylvania, New York, and the New England States. The total area of the consular district is about 108,000 square miles, or, roughly, twice the size of the State of Illinois.

The average annual rainfall is 23.41 inches, the average minimum temperature (January) 8° F., and the average maximum temperature (August) 73° F. The rainy season is July and August, the dry season from October to May, inclusive. On the whole the weather in South Manchuria is clear, dry, and bracing—the winter being without heavy snowfall, but occasionally subject to extreme cold.

POPULATION

The population, according to Chinese post-office statistics, is estimated at 14,000,000, with an average density for the whole district of 130 per square mile. Not more than a tenth of the population is descended from the original Manchu stock, the great bulk being immigrants from Shantung and Chihli and their descendants.

CITIES

Mukden, the capital and seat of Government of Shengking Province, is in about the same latitude as Boston. The other important cities of the district are:

Cities	Location	Population of district (estimated)	Number of Europeans	Number of Americans	Number of American business firms
Mukden ¹	Shengking	773,846	220	72	9
Newchwang ¹	do	194,520	70	7	1
Liaoyang ¹	do	149,662	20	None.	None.
Haicheng	do	578,574	None.	None.	None.
Changtu	do	430,097	None.	None.	None.
Ilseinmin ¹	do	468,313	None.	None.	None.
Tiehling ¹	do	370,329	None.	None.	None.
Chinchow	do	357,160	None.	None.	None.
Kirin ¹	Kirin	622,783	20	3	None.
Changchun ¹	do	526,333	8	3	None.

¹ Treaty port where foreigners may reside for trade purposes.

The population of the cities as given above does not mean the urban population alone, but includes the population of the surrounding rural districts which are tributary to them. Mukden is an important

interior distributing center, being connected by the South Manchuria Railway with Dairen, Antung, Newchwang, Changchun, and Kirin; by the Chinese Eastern Railway (which meets the South Manchuria at Changchun) with Harbin and points in North Manchuria and Siberia; by the Peking-Mukden Railway with Taonanfu, Tientsin, and Peking. Newchwang is the only seaport of importance in the district. The bulk of the import and export trade of South Manchuria, passing through Dairen, is included in the figures of the Dairen consular district.

In addition to the trade centers listed, where foreigners may reside for trade purposes, the following places in the district are also open to foreign trade: Tatungkow, Fenghwangcheng, Tungkiangtze, Fakumen, Taonan, Hulutao, and Liaoyuan, all in Shengking (Fengtien) Province, and Chutzechieh, Towtaokow, Potsaokou, Hunchun, and Lungchingtsun in Kirin Province.

At Mukden and Newchwang certain areas, municipally administered by the Chinese authorities, hold most of the residences and business houses of Europeans and Americans, as well as the foreign consulates. In these cities Americans may hold perpetual leases on land, and may rent or purchase houses or other buildings. At Mukden there is also a settlement leased and administered by the South Manchuria Railway (Japanese) in which Americans and Europeans are permitted to reside and conduct business. The same is also true of the leased zone of the South Manchuria Railway which runs from Dairen to Changchun.

AGRICULTURAL AND ANIMAL PRODUCTS

The cultivation of soy beans and the manufacture of bean products constitute the greatest industry in the district. Bean cake is the leading export. Wheat, the local consumption of which is rapidly increasing, is also important. Kaoliang, maize, and millet are staple foods of the natives, and considerable quantities are exported to other parts of China. Tobacco is grown and utilized by native and foreign firms which manufacture locally, blending imported leaf with the native product. Vegetable seeds are cultivated, and the cultivation of sugar beets, cotton, and paddy rice is being undertaken on a considerable scale within recent years. Methods of tillage are very crude, although American tractors are being introduced among some of the larger farmers. One American firm keeps an American representative in the field for the purpose of extending distribution through education of the farmers in modern agricultural methods.

The livestock of South Manchuria and eastern Mongolia is estimated as follows: Horses, 3,120,000; mules, 630,000; donkeys, 600,000; pigs, 6,700,000; cattle, 2,000,000; sheep, 2,500,000. It is estimated that over 5,000,000 pounds of wool are produced annually in the district, the greater part being used locally. Large quantities of bristles and horsehair are produced and exported to the United States, Japan, and Europe. Furs and skins are also an important addition to the trade of the district. A considerable part of the fur products from Siberia pass through Mukden, and there are numerous American and European fur buyers in the city during the winter fur season. Mukden has always been a center for the tanning of furs and skins, a great variety of such products being offered. Exports

of furs and skins to the United States reach a large volume annually.

The agricultural office of the South Manchuria Railway Co. estimates the total annual value of agricultural products in Manchuria and eastern Mongolia to be approximately \$500,000,000 United States currency.

The principal agricultural products of the district, the planting and harvesting seasons, the average production per acre, the estimated annual production, and the final disposition thereof, are shown in the following table:

Product	Planting season	Harvesting season	Average production per acre	Estimated annual production	Use or disposition
			<i>Bushels</i>	<i>Bushels</i>	
Soy beans.....	Apr. 20-30	Sept. 25-30	27	66,000,000	Chiefly export.
Kaoliang (<i>Sorghum vulgare</i>).....	Apr. 20-May 10	Sept. 20-25	30.6	73,000,000	Local and export.
Millet (<i>Panicum italicum</i>).....	.....do.....	Sept. 20	29.9	74,000,000	Do.
Millet (<i>Panicum cuscorri</i>).....	May 1-20	Sept. 10	30.6	4,225,000	Local.
Millet (<i>Panicum miliaceum glutinosus</i>).....	.....do.....	.....do.....	27.1	4,500,000	Local and export.
Maize.....	Apr. 10-15	Sept. 20	32.4	29,000,000	Do.
Wheat.....	Apr. 5-10	July 15-20	23	10,000,000	Local.
Barley.....	Apr. 1-5	July 10-15	25	31,000,000	Local and export.
Upland rice.....	Apr. 15	Sept. 20	33.8	7,000,000	Do.
Paddy rice.....	May 1	Sept. 20-30	33.2	5,700,000	Do.
Red bean.....	May 15-20	Sept. 24-30	23	7,500,000	Do.
			<i>Pounds</i>	<i>Tons</i>	
Tobacco.....	May 7	Sept. 10	816	25,000	Local.
Hemp and jute.....	Apr. 15	Aug. 20-30	160	20,000	Local and export.
Sugar beets.....	May	September	12,000	45,000	Local.

Castor seeds, sesamum seeds, and cotton are also cultivated on a large scale. The first two are planted during the first 15 days in April and harvested in the middle of October. The production per acre is 11 and 10 bushels, respectively. These seeds are largely exported, a considerable quantity going to the United States. The cultivation of cotton is considered to be of great importance in the district. The acreage is constantly increasing, and owing to the development of the cotton-weaving industry in Manchuria during recent years, every effort is being made by both Chinese and Japanese to develop a local supply of raw material. It is estimated that Manchuria produces annually approximately 20,000,000 pounds of cotton with a ginned cotton yield of 6,700,000 pounds or 13,400 bales of 500 pounds. However, as the annual demand is believed to be about 350,000 bales of cotton yarn and cloth, Manchuria will remain a cotton-importing section for the immediate future.

MINERALS AND MINING

The most important minerals in South Manchuria are coal, iron, copper, gold, silver, lead, asbestos, magnesite, talc, fluorite, and feldspar. Manganese is also mined. Gold is largely found in placer deposits and is mined only on a small scale. There are wide deposits of iron ore at Anshan and in the vicinity of Penhsihu which are worked on a large scale with modern mining machinery. The principal coal mines are at Fushun, Penhsihu, Yentai, Patachao, Peipiao, and Tayaokow. Coal strata of narrow aqueous rock formation appear on the surface near Liaoyang, Penhsihu, the upper stream of the Taitze River, and south of Wafangtien. Along the Taitze River a stratum runs east and west, being exposed at four places. This stratum con-

sists of light green peat, black shale, a variety of gray coal, etc. In addition to the stratum which appears near the surface at the Yentai Colliery near Liaoyang, there are apparently smaller strata at various points between Mukden and Kaiyuan.

The Penhsihu coal field is under the jurisdiction of the Penhsihu district, Shengking (Fengtien) Province. The field extends to the southwest from the northeast border of the city of Penhsihu and crosses the South Manchuria Railway line. It covers an area of 10,900 acres. The rock formation belongs to the Paleozoic period and is composed of a single seam running east and west, the western fault line being formed by the Hsintungkao Valley.

The Fushun coal field is located 20 miles east of the city of Mukden on the bank of the Hun River. The total area is approximately 15,000 acres, running west for about 10 miles parallel with the river. The thickness of the seam shows a minimum of 78 feet and a maximum of 420 feet, with an average of 130 feet.

The Yentai coal mine is situated about 10 miles northeast of Yentai Station on the Mukden-Dairen line of the South Manchuria Railway. The coal field runs for about $3\frac{1}{2}$ miles north and south with a breadth of 1 mile.

These three mines are operated on a large scale, with modern machinery.

There are 12 iron deposits connected with the Penhsihu Iron Mining Co. (Sino-Japanese), which maintains a pig-iron smelting plant at Penhsihu.

The iron-mining rights at Anshan are held by the Chenhsing Kungsu, a Sino-Japanese corporation. The South Manchuria Railway, under an agreement with this firm, whereby the total output of the mines is supplied to the railway, has established a large modern steel works at the Anshan Station of the South Manchuria Railway. The ore deposits consist of red hematite and, rarely, of brown hematite. The thickness of the ore strata ranges from 300 feet to 500 feet, with interlying seams of siliceous rocks.

The following list shows the more important coal mines in the district:

Name	Location	Output	Nationality
		<i>Tons</i>	
Peipiao Coal Mining Co.....	Peipiao, Chaoyang, and district.	500, 000	Chinese.
Ta Yao Kow Coal Mining Co.	30 miles northwest of Chinchow.	100, 000	Do.
Pataoho coal mine.....	Pataoho, Heishanhsien.....	70, 000	Do.
Lientun coal mine.....	Kangpinghsien.....	15, 000	Do.
Hsincheng coal mine.....	Hsincheng.....	10, 000	Do.
Fushun coal mine.....	Fushun, 15 miles east of Mukden	4, 900, 000	Japanese.
Penhsihu coal mines.....	Penhsihu, Shengking Province..	450, 000	Sino-Japanese.
Yentai coal mine.....	Yentai, Shengking Province.....	110, 000	Japanese.
Niu Hsin Tai mines.....	10 miles east of Penhsihu.....	(1)	Sino-Japanese.
Hsiao Shih mine.....	40 miles up Taitze River.....	(1)	Not operated.
Tien Shih Fukow mine.....	53 miles east of Penhsihu.....	(1)	Chinese.
Ta Ko Ta mine.....	14 miles north of Hsianhsien..	60, 000	Chinese (6 companies).
T'ao Lu mines.....	8 to 15 miles north of Hsifenghsien.	10, 000	Chinese (4 companies).
T'ien Ho Tun mine.....	8 miles southwest of Kuanya....	(1)	
Huo Shih Ling mine.....	3 miles north of Yingchengtze station on Kirin-Changchun Railroad.	10, 000	Chinese.
K'uan Ch'en Tze mines.....	Shihpelling, $1\frac{1}{2}$ miles east of Changchun; Tauchiatur, 2 miles southeast of Changchun.	(1)	Japanese; South Manchuria Mining Co.
Lao T'u Kow mine.....	2 miles west of Chientao, Chutzechieh.	(1)	Sino-Japanese.

¹ Fairly large deposits.

The Pei Piao Coal Co., producing bituminous coal, is operated with a capital of \$5,000,000 silver, the head office being at Tientsin. The Pataoho, Lientun, and Hsintun mines are worked under the supervision of the Fengtien (Shengking) Mining Bureau at Mukden. The Fushun and Yentai mines are subsidiary companies of the South Manchuria Railway.

The principal iron mines are:

Name	Location	Ore	Output of pig iron, 1923	Capital	Nationality
Anshan iron mine....	Anshan....	Hematite, limonite....	Tons 90,000	.....	Operated by South Manchuria Ry. Co. (Japanese). Sino-Japanese.
Penhsihu iron mine....	Penhsihu....	Magnetite, hematite....	24,000	\$7,000,000	

In addition there are the Kungchangling Iron mine, between Liao-yang and Penhsihu, which has both magnetite and hematite deposits and is operated by a Sino-Japanese company; the Miao Erh Kow iron mine, 2 miles east of Nanfen on the Mukden-Antung line, also composed of magnetite and hematite, and operated by the Penhsihu Iron Mining Co.; the Ta Li Tze Kow iron mine, 16 miles southwest of Maotzeshan, which supplies hematite ore to native smelters; the Chi Tao Kow iron mine, 8 miles southeast of Tung-hwahsien, and the Pao Chu iron mine, situated 33 miles southeast of Hailung, Shengking (Fengtien) Province.

Other principal mines, of various metals and minerals, are shown in the table below:

Name	Location	Ore	Nationality
COPPER			
Pan Ling copper mine.....	22 miles northeast of Tsao-hokou on the Mukden-Antung line.	Copper pyrites....	Sino-Japanese mining company has applied for concession (Chunichi Mining Co.).
Ma Lu Kow copper mine....	25 miles east of Penhsihu station.	Malachite.....	Okura & Co., Japanese.
Su Tze Huo Ho copper mine.	38 miles from Tiehling up Chai River.	Copper pyrites....	Sino-Japanese.
T'ien Pao Shan copper and silver mine.	10 miles southwest of Lao Tu Kow coal mines at Chientao.	Argentite.....	Sino-Japanese, South Manchuria Ry. and Taiko Co.
Panshih Mining Co.....	Shihtsultze, near Panshih, Kirin.	Pyrites and malachite.	Chinese.
GOLD			
Maerhsan gold mine.....	23½ miles north of Maerhsan.	Placer mining....	British company interested in district.
Ta Miao Kow gold mine....	6 miles south of Tung-hwa.	Ore.....	Do.
Pao Ma Chuan gold mine..	37 miles south of Tung-hwa.	Placer and ore....	Hoachan Co., Chinese.
Hsiang Lu Wan Tze gold mine.	14 miles southeast of Peishan-chentze.	.....do.....	Shukao Co., Chinese.
Chai Ifo Pu gold mine.....	24 miles east of Tiehling...	Placer mining....	Chinese and Japanese are interested.
LEAD			
Ch'ing Ch'en Tze lead mine	32 miles west of Tung-yuan-pu station.	Galena.....	Sino-Japanese, Chunichi Co.

Name	Location	Ore	Nationality
MAGNESITE			
Chuan Shan Tze mine.....	2 miles north of Shakang on South Manchuria Ry. line.	Considerable quantity.	Shinko Co., Chinese, connected with South Manchuria Ry. Co.
Pingchrfang magnesite mine	Tashihkiao	1,000 tons	Chinese.
Pai Iiu Shan mine.....	3 miles south of Tashihkiao station on South Manchuria Ry.	Considerable quantity.	Shinko Co., Chinese, connected with South Manchuria Ry. Co.
Kuan Ma Shan mine.....	3 miles east of Tashihkiao station on South Manchuria Ry.	do.....	Chinese company, connected with South Manchuria Ry. Co.
Ta Ling mine.....	5 miles northeast of Tashihkiao station on South Manchuria Ry.	do.....	Tenko Co.
Hua Shih Ling mine.....	9-15 miles southeast of Haicheng.	do.....	Chinese company, connected with South Manchuria Ry. Co.
Ch'in Ma Yu mine.....	12-15 miles southeast of Haicheng.	do.....	Do.
ASBESTOS			
Li Yung Co. (Ltd.).....	Chinchow, Fengtien; mines at Sungchiang-tse, 10 miles south of Chaoyang.	do.....	Chinese.
TALC			
Sungchiaputze mine.....	10 miles south of Haicheng.	Considerable quantity.	Chinese company, connected with South Manchuria Ry. Co.
Talin talc mine.....	Tashihkiao.....	6,000 tons.....	Chinese.
FLUORITE			
Lucliatun mine.....	5 miles southeast of Lucliatun station, Kaipinghsien.	Small quantity.....	Chinese.
Tsui Chia Tun.....	2 miles south of Tungchiatun station, Kaipinghsien.	do.....	Chinese.
FELDSPAR			
Shih Ta Shan mine.....	7 miles south of Haichenghsien.	Considerable quantity.	Chinese company, connected with South Manchuria Ry. Co.
SODA			
Fishery and soda company.	Chengchiatun.....	(Liao River soda fields.)	Chinese.
Tien Hui Soda Co.....	12 miles from Tapusu, Kirin.	(Lake Tapusu soda fields.)	Chinese.
Yu Chien Co.....	Wentu, Chengkiatun, Shengking.	Crystal soda, 2,300,000 pounds.	Chinese.
MANGANESE			
Hsincheng manganese mine.	Hsincheng.....	2,000 tons.....	Chinese.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

It is estimated that there are 121 bean mills in the district, along the South Manchuria Railway, producing annually 10,500,000 pieces of bean cake and 437,000 piculs of bean oil. There are also 700 or 800 smaller mills scattered throughout the interior which bring the total production to about 15,000,000 pieces of bean cake and 600,000 piculs of bean oil a year. Bean products are chiefly exported, being shipped to ports via the Liao River and the South Manchuria Railway. Investments in oil mills are estimated to be \$9,000,000 United States currency.

The manufacture of cotton cloth and yarn is second in importance to the bean industry. The Manchuria Spinning Mill at Liao-

yang (Japanese) and the Mukden Spinning & Weaving Works at Mukden (Chinese) both produce cotton yarn, the first having 30,000 and the second 20,000 spindles. The total production of cotton yarn of the two mills is estimated at 28,000 bales (of 400 pounds each) per year. About \$3,250,000 United States currency is invested. The Mukden Spinning & Weaving Works also operates 200 looms with an estimated daily production of 30 bales or 600 rolls of cotton cloth, the annual production being 210,000 rolls. The only other large cotton-weaving mill under operation is at Tiehling—the Manchuria Cotton Weaving Co., which has an estimated production of 243,000 rolls a year. In addition, there are approximately 3,000 looms in smaller factories in Mukden, Liaoyang, and Newchwang, producing cotton cloth, ankle tape, bandages, sheetings, etc., with an estimated output of one roll per loom a day. In the aggregate, about 2,500,000 rolls or 100,000,000 yards of cotton manufactures are produced, with a probable investment of \$6,600,000 United States currency. American textile machinery is used in the Mukden Spinning & Weaving Works.

Beet sugar is manufactured at Mukden and Tiehling by the South Manchuria Sugar Refining Co. Local beets and crude Java sugar are utilized, with an annual output of 8,300 tons of refined sugar, chiefly for local consumption. Capital to the amount of \$5,000,000 United States currency is employed.

The center of the flour industry is at Changchun in Kirin Province. The estimated daily production during the milling season is 26,000 bags per day, produced with a capital of \$2,900,000 United States currency. This flour is consumed locally.

There are 22 iron works in the district, all being small with the exception of the Penhsihu and the Anshan Iron Works. Pig iron to the amount of 102,000 tons a year is manufactured, chiefly for export to Japan. Other iron products are cast iron, 500 tons; iron pipes, 1,428 tons; machinery, wrought iron, construction materials, etc., 72,000 tons per year, for local use. Investments in iron works are estimated at \$26,000,000 United States currency.

Other manufacturing industries, and their estimated annual outputs, are: Matches, 276,000 cases; gunny sacks, 537,000 pieces; gas, 28,000,000 cubic feet; bricks, 20,000,000 pieces; earthen pipe, 24,000 pieces; tiles, 34,000 pieces; medicine bottles, 429,000 pieces; lamps, chimneys, etc., 212,000 dozen; candles, 10,000 cases; cement, 4,700 barrels; quick lime, 2,000 tons; potassium chlorate, 28,450 pounds; sulphate of ammonia, 6,600 tons; magnesia, 830 tons; ice, 1,700 tons; coal tar, 1,000 tons; talc, 1,000 tons; lead, 300 tons. Cigarettes, alcohol, woolen products, paper, manufactured skins, dog mats, etc., are manufactured in some quantity. There is as yet not a sufficient production of most products to meet local demands, with the exception of pig iron, skins, and sulphate of ammonia, of which the greater part is exported.

LABOR CONDITIONS

The following table gives an indication of the wages prevailing at Mukden:

[Figures given in local currency; \$1 equals approximately \$0.35 United States currency]

Classes	High	Low	Average
Laborer.....	\$1.70	\$1.30	\$1.50
Fireman.....	1.60	1.20	1.40
Mason.....	1.85	1.30	1.50
Cement worker.....	2.00	1.50	1.70
Blacksmith.....	2.00	1.40	1.70
Plasterer.....	1.50	.90	1.30
Painter.....	2.40	1.90	2.10
Carpenter.....	1.70	1.20	1.40
Cabinetmaker.....	1.80	1.20	1.40
Tinsmith.....	1.90	1.40	1.60
Teamster:			
One horse.....	1.80	1.10	1.50
Two horses.....	2.00	1.30	1.70

The above figures are indicative of wages paid by Chinese to native laborers. Labor charges incurred by foreigners in the employment of Chinese are usually considerably higher.

Foreigners employed in the district by foreign companies—engineers, accountants, factory superintendents, stenographers, etc.—receive about 25 per cent more than is paid for similar work in the United States.

Native labor has not reached a high grade of efficiency in modern industrial methods, although favorable results are obtained from factory hands when well trained. Up to the present time there have been no serious labor disturbances.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The highest tide ever registered on the bar at the mouth of the Liao River was 22.7 feet, which makes it impossible for vessels drawing 25 feet to enter. The average spring tide across the bar is 19 feet, hence boats drawing 20 feet can only very rarely cross the bar. In summer 20 and 21 feet are occasionally registered, but vessels rarely load over 19 feet when entering the port of Newchwang, and generally only 18 feet. Boats drawing 15 feet can cross the bar at high water and can navigate up river to Swan Island, or 10½ miles above Newchwang. At low tide steamers of 15-foot draft can proceed only to a point 3½ miles above Newchwang, crossing the bar at high tide. Steamers drawing 6 feet can cross the bar at any time and can navigate upstream to a point 62 miles north of Newchwang, as far as Sanchiaho, which is the junction of the Taitze, Hun, and Liao Rivers. The river above this point is shallow, and only launches and junks can navigate in ordinary times. Launches (draft, 2½ feet) can navigate on occasions as far as the Mukden-Shanhaikwan Railway crossing, 150 miles above Newchwang, and small native junks proceed as far as Tungkiantze.

During 1923, 16,627 vessels crossed the bar at Newchwang and entered the Liao River, with a total tonnage of 14,669,917. In the same period 160,485 tons of beans and bean products were shipped down the river from interior points. While the upriver cargo is also considerable, there are no statistics available in regard to the volume of this transportation.

Transportation charges, taking coal as a basis of calculation, are estimated to be \$1.20 United States currency per ton for 100 miles. These figures are for upstream transportation charges, which are somewhat higher than rates for downstream shipments. Carload cargo over the South Manchuria Railway line ranges from \$2.60 United States currency for first class to \$1.05 for fourth-class cargo per 100 miles (figuring 1 yen as equal to \$0.42). Despite favorable freight rates, the Liao River is chiefly valuable to foreign trade as a means of transportation of raw products from the interior, since, owing to lack of modern facilities such as warehouses, terminals, etc., convenient means of distributing foreign imported products are not afforded.

RAILWAYS

The following table shows mileage on the South Manchuria Railway:

	Miles
Dairen to Changchun.....	437.6
Dairen to Port Arthur.....	31.6
Antung to Mukden.....	161.7
Tashikiao to Newchwang.....	13.9
Fushun branch line.....	32.9
Hushutai to Hunho.....	2.5
Total.....	680.2

The following table shows the freight rates per ton per mile (carload):

	First class	Second class	Third class	Fourth class
Up to 100 miles.....	Yen 0.0625	Yen 0.05	Yen 0.0375	Yen 0.025
101 to 200 miles.....	.06	.048	.036	.024
201 to 400 miles.....	.0575	.046	.0345	.023
Over 400 miles.....	.055	.044	.033	.022

Charges based on a rate per kin (1 kin equals approximately 1½ pounds) are 10 per cent of the carload rate per 100 kins. Also, terminal charges of 0.05 yen per 100 kins are levied on kin-rate goods and 0.50 per ton on carload goods. Terminal charges and freight rates are collected together. There is no rebate system in force, but when consignees are found unable to bear the freight charges, and it is necessary to assist them, special freight rates are provided.

There are certain specific freight rates on goods carried to and from Dairen and Antung. The first class is applicable to kerosene and kindred oils, matches, quicklime, and carbide only and is both on a kin and carload basis. The second class is in effect on

kerosene shipped from Dairen only. The third class applies to victuals and building materials. On rice, soy, salt (table and refined only), vegetables, fresh fish, salted and dried fish, as well as on firewood and charcoal, a 30 per cent reduction from the ordinary rates, or the specific rates to and from Dairen and Antung, may be applied.

On building materials, timber (fourth class only), stone (fourth class only), cement, pozzuolana, lime, brick (glazed brick excluded), tiles, mats and mattresses, and household furnishings, a 25 per cent reduction from the ordinary rates, or the specific rates to and from Dairen and Antung, may be obtained. Minimum carload weights range from 15 to 30 tons.

A reduction of 30 per cent on 11 kinds of through freight, including cotton piece goods and yarn, carried from the terminal points Dairen, Newchwang, and Antung has been allowed by the company.

Passenger fares per mile on the South Manchuria Railway are as follows (1 yen equals, under normal exchange, \$0.498 $\frac{1}{2}$ United States): First class, 0.07 yen; second class, 0.045 yen; third class, 0.025 yen.

The mileage of the Changchun-Kirin Railway is 79.4. Its freight rates per ton per mile (carload) are as follows: First class, \$0.0981 Yuan; second class, \$0.0818; third class, \$0.0654; fourth class, \$0.0491; fifth class, \$0.0327; sixth class, \$0.0245 Yuan. Its freight rates per kori (1 kori equals 0.35791 mile) are: First class, \$0.046 Yuan; second class, \$0.032; third class, \$0.018. (\$1 Yuan equals approximately \$0.50 United States.)

The mileage of the Ssuning-kai-Taonan Railway is 264.1. Its freight rates per ton per mile (carload) are: First class, \$0.1063 Yuan; second class, \$0.09; third class, \$0.0736; fourth class, \$0.0573; fifth class, \$0.0491; sixth class, \$0.0409. Passenger fares per kori are: First class, \$0.05 Yuan; second class, \$0.03; third class, \$0.02.

That section of the Peking-Mukden Railway which lies within the Mukden consular district extends from Mukden to Shanhaikwan, a distance of 420.78 kilometers. The freight rates per 50 kilos per kilometer are shown in the table below (1 kilo=2.2046 pounds; 1 kilometer=0.62 mile):

Kilometers	Classes					
	1	2	3	4	5	6
	Yuan	Yuan	Yuan	Yuan	Yuan	Yuan
1 to 20.....	\$0.002	\$2.078	\$0.064	\$0.050	\$0.036	\$0.034
40.....	.184	.156	.128	.100	.072	.068
60.....	.276	.234	.192	.150	.108	.102
80.....	.368	.312	.256	.200	.144	.136
100.....	.460	.390	.320	.250	.180	.168
200.....	.878	.744	.610	.477	.343	.324
300.....	1.280	1.085	.890	.695	.500	.478
400.....	1.659	1.407	1.154	.901	.649	.618
500.....	2.032	1.723	1.413	1.104	.795	.754
708.....	2.699	2.289	1.877	1.468	1.056	1.002

While the above figures give the general rates according to distances, there is an increasing scale for each kilometer over which

goods are transported. The last distance given, 708 kilometers, is the distance between Mukden and Tientsin and shows charges on goods imported into the district through that port.

The following tables give metric-ton rates:

FREIGHT RATES PER METRIC TON (MINIMUM CHARGE 1 TON)

Kilometers	Classes					
	1	2	3	4	5	6
	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>
1 to 20.....	\$1.380	\$1.170	\$0.960	\$0.750	\$0.540	\$0.440
40.....	2.760	2.340	1.920	1.500	1.080	.880
60.....	4.140	3.510	2.880	2.250	1.620	1.320
80.....	5.520	4.680	3.840	3.000	2.160	1.760
100.....	6.900	5.850	4.800	3.750	2.700	2.200
200.....	13.455	11.408	9.360	7.313	5.265	4.290
300.....	19.665	16.673	13.680	10.688	7.695	6.270
400.....	25.177	21.350	17.484	13.667	9.850	8.033
500.....	30.629	25.972	21.270	16.621	11.972	9.758
708.....	40.448	34.298	28.149	22.000	15.851	12.922

CARLOAD RATE PER METRIC TON

	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>	<i>Yuan</i>
1 to 20.....	\$0.920	\$0.780	\$0.640	\$0.500	\$0.360	\$0.220
40.....	1.840	1.560	1.280	1.000	.720	.440
60.....	2.760	2.340	1.920	1.500	1.080	.660
80.....	3.680	3.120	2.560	2.000	1.440	.880
100.....	4.600	3.900	3.200	2.500	1.800	1.100
200.....	8.782	7.445	6.108	4.771	3.435	2.098
300.....	12.800	10.855	8.906	6.957	5.009	3.060
400.....	16.598	14.077	11.547	9.018	6.499	3.960
500.....	20.322	17.230	14.136	11.047	7.955	4.863
708.....	26.997	22.898	18.779	14.680	10.561	6.461

Freight rates per metric ton and carload rates per metric ton are also on an increasing scale for each kilometer covered. The above charges are given in silver Yuan dollars, which under normal exchange equal approximately \$0.50 United States currency.

Storage charges for ordinary goods (owner's risk) are as follows: "50-kilo" rate goods, for every 24 hours or part thereof, 5 cents per 50 kilos; "ton" rate goods, for every 24 hours or part thereof, 25 cents per ton. (Charges figured in silver dollars.) Open storage may be arranged for, the charge being \$10 per "space" of 15 square feet per month for "goods" and \$5 for "minerals." (Charges in silver.) Valuable goods, goods likely to cause danger to other goods, and goods of a perishable nature are not accepted for storage.

ROADS

With the exception of various parts of the city of Mukden, there are no roads in the district constructed for motor transportation. The roads in general are cart paths, nearly impassable during the rainy months of the year. The lack of stone deposits hinders the improvement of roads. During the winter months when the country is icebound, the use of motor vehicles is practicable, it being considered that a small type of tractor, whereby produce could be transported to the markets in trailers, would be especially suitable. A

small number of tractors have been introduced for general farming purposes.

Roads around large trade centers such as Mukden, Changchun, Tiehling, Kirin, and Newchwang are adaptable to motor transportation for short hauls during the winter months, and there is a tendency to appreciate the value of such transportation. Motor vehicles in the district are distributed as follows: Electric automobiles—Mukden, 1. Gasoline automobiles—Mukden, 97; Anshan, 4; Changchun, 30; Fushun, 5; Newchwang, 2; Kirin, 7; Tiehling, 1. Motor trucks—Mukden, 15; Changchun, 11; Fushun, 3; Liaoyang, 1; Ssuningkai, 3; Tiehling, 1. There are 21 trailers in use in the vicinity of Changchun.

There are no road fees or tolls which affect the transportation of foreign products. Foreign merchandise usually moves under a transit pass which exempts it from further taxation.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

Telegraphic communication is under the jurisdiction of the Telegraph Administration of the three eastern Provinces. The total length of lines in Manchuria is 7,600 miles, with 140 telegraph offices. Commercial telegrams are divided into the following classes: Fourth class, ordinary messages, \$0.06 Yuan per word (\$1 Yuan equals approximately \$0.50 United States) or \$0.09 Yuan per word for cipher and foreign-language messages; third class, urgent messages, \$0.18 Yuan per word or \$0.27 Yuan for cipher and foreign-language messages. For telegrams sent to other Provinces in China the rate is double.

Japanese telegraph stations are maintained in connection with the post offices at stations along the South Manchuria Railway.

Cable connections with the United States are via Shanghai by the Chinese lines and via Japan and the Bonin Islands by the Japanese lines. The cable rate for a private or commercial telegram from Mukden to New York by Chinese connections is \$1.90 Yuan per word, and urgent messages carry a triple rate. By Japanese connections the charge is 2.70 yen per word (1 yen equals approximately \$0.42 United States) via the Bonin Islands, and 1.74 yen per word by wireless from Japan. Wireless stations in Manchuria have been operated for military purposes only, but it is planned to throw open some of them to commercial use in the near future, probably at Mukden, Harbin, Changchun, and Taonanfu. There are no private or commercial broadcasting or receiving stations in the district.

TELEPHONES

Two telephone services operate in Mukden, one Chinese and the other Japanese. The Chinese system operates 1,375 telephones on about 1,538 miles of wire. The Japanese service operates 1,693 instruments. As most of the cities are in the South Manchuria Railway zone, Japanese systems are maintained in them as separate services. The Chinese telephone administration at Mukden has purchased considerable American equipment, although the greater part of the installation supplies for both the Chinese and Japanese services was obtained from the Nippon Electric Co., Tokyo, Japan.

The number of subscribers at the various places is shown below:

Cities	Chinese service	Japanese service	Cities	Chinese service	Japanese service
Mukden.....	1,375	1,693	Changchun.....	200	1,308
Tiehling.....	220	305	Newchwang.....	² 1,200	-----
Kalyuan.....	138	434	Fushun.....	140	276
Changtu.....	50	(¹)	Fenghwangcheng.....	43	(¹)
Saipingkai.....	201	255	Kirin.....	480	(¹)
Kungchuling.....	60 ¹	226	Wafaungtien.....	58	80
Fenchiatun.....	30	121	Kaiping.....	85	(¹)

¹ No service.

² Sino-Japanese service.

POSTAL FACILITIES

Chinese postal affairs in the Province of Fengtien are in the hands of a postal commissioner residing in Mukden. Post offices, of which there are 148, with 315 agencies, are established in all important cities and towns. Japanese post offices are maintained at all towns in the South Manchuria Railway zone, and these offices furnish parcel-post and money-order facilities with the United States. The rates and regulations are the same as those in Japan with respect to mails to the United States, all being operated under the provisions of the International Postal Union. The time for transmission of letters to or from New York via the Pacific is 28 days. Letters to Peking and Tientsin reach their destination in one day.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

Newchwang, which is located on the Gulf of Liaotung at the mouth of the Liao River, is the only port of importance in the Mukden consular district. There are no docks or special anchorages, but if advance notice of arrival is given, the pilot will have instructions for berthing. The wharfage at Newchwang is limited to the Chinese Government Railway wharf on the north side of the river and several wharves on the south shore above the customhouse. Ships at Newchwang generally do not have difficulty in finding a wharf where cargo may be discharged. If no such facilities are available, cargo may be discharged by lighters.

There are about 190 lighters in the port, about 100 being available for hire. The cost is approximately \$45 to \$50 Mex. per day, including the wages of men handling cargo.

The following statistics give the number of vessels entered and cleared at the Maritime Customs at Newchwang during 1923:

Nationality	Number	Tonnage	Nationality	Number	Tonnage
American.....	4	20,200	Norwegian.....	30	26,500
British.....	312	394,692	Russian.....	12	16,516
Danish.....	2	6,850	Chinese.....	794	526,146
Dutch.....	4	9,096			
French.....	6	18,572	Total.....	1,488	1,277,460
Japanese.....	324	259,488			

A branch line connects the port with the South Manchuria Railway, whereby goods may be distributed to all large trade centers in South Manchuria. The Liao River also forms an excellent means of distribution in eastern Shengking (Fengtien) Province. In 1923, 160,485 tons of beans and bean products were brought from the upper Liao River district to Newchwang by native junks, the amount of such transportation over the route having increased considerably during recent years.

WAREHOUSE AND STORAGE FACILITIES

Warehouses are established along the South Manchuria Railway at Mukden, Liaoyang, Changchun, Ssuningkai, Kungchuling, Newchwang, Fushun, Tiehling, Kaiyuan, Changtu, Yentai, Suchiatun, Hsintaitzu, Fenchiatun, Shwangmiaotze, and Kuochiatien. The warehouses in the Kwangtung leased territory, at Dairen, serve as a central depot for goods transported to and from Manchuria via that port. Storage charges at warehouses maintained by the South Manchuria Railway are 2 sen per 100 kin (133 pounds) or 20 sen per ton on carload goods for every 24 hours or less (1 sen equals, under normal exchange, \$0.0048 United States).

A mixed storage system for beans packed in gunny bags is operated at these places. Warehouse receipts are issued for goods in storage which may be used as commercial paper in financing exports and imports. Goods in storage are subject to a compulsory fire-insurance regulation, such insurance being effected by the railway company. The Chinese agents of foreign firms usually distribute goods for sale at interior points, the foreign traders supplying the necessary quantities from the central warehouses.

PUBLIC UTILITIES

ELECTRIC LIGHT PLANTS

The establishment of electric light and power plants throughout Manchuria has been an important line of endeavor of American, European, and Japanese firms in China. Manchuria has tried and recognizes the value of such public utilities, the oil lamp and candle having to a considerable extent been supplanted by the electric light in many urban centers. The establishment of American machinery, which in many cases has included entire plants, has in particular opened up the market to further sales of American equipment for extensions and repair supplies, familiarity having engendered confidence in American electrical manufactures. It is expected that electrical development will continue, and the further installation of plants will depend, as usual, on the supporting capacity of a given locality, which in its turn is based on commercial or agricultural development. It is important to keep this point in mind while selling equipment, as in many cases notes must be taken for future payment, the only guaranty thereof being the future revenue of the utility. An estimate as to the countries of origin of electrical goods imported directly into Manchuria at the present time may be obtained from the section in this handbook on "Imports."

The electric light and power plants now operated in this consular district are as follows:

Changchun Electric Light Plant, Changchun, Kirin, China.
 Chinchow Electric Light Co. (Ltd.), Chinchow, Shengking (Fengtien), China.
 Fukiatun Electric Light Co., Fukiatun, Shengking, China.
 Fushun Collieries Electric Plant, Fushun, Shengking, China.
 Hua Hsin Electric Light Co., Liaoyuan, Shengking, China.
 Kiaotow Electric Light Plant, Kiaotow, Shengking, China.
 Kungchuling Electric Light Plant, Kungchuling, Shengking, China.
 Liaoyang Electric Light Plant, Si Kwan, Liaoyang, China.
 Manchurian Electric Light Co., Kaiyuan, Shengking, China.
 Ming Sing Electric Light Co., Kaiping, Shengking, China.
 Mukden Electric Plant, Mukden, Shengking, China.
 Mukden Government Electric Light Works, Mukden, China.
 Penki Electric Light Plant, Penki, Shengking, China.
 Pukwang Electric Light Co., Changtu, Shengking, China.
 Sian Electric Light Co., Sian, Shengking, China.
 Sifeng Electric Light Co., Sifeng, Shengking, China.
 Ssuping kai Electric Light Co., Ssuping kai, Shengking, China.
 Sukiatun Electric Light Plant, Sukiatunkai, Shengking, China.
 Tashikiao Electric Light Co., Tashikiao, Shengking, China.
 Three Eastern Provinces Cotton Mill Electrical Plant, Mukden, China.
 Tiehling Electric Light & Power Co., Tiehling, Shengking, China.
 Tsenkinchai Electrical Plant, Tsenkinchai, China.
 Tungliao chen Electric Light Co., Tungliao chen, Shengking, China.
 Wafangtien Electric Light Co., Wafangtien, Shengking, China.

WATERWORKS

With the exception of a small waterworks and sewerage system maintained by the South Manchuria Railway Co. in its settlement in the city, there is no water supply or sewerage system in Mukden. Arterian wells are used extensively. The Yinkow Waterworks & Electricity Co., a Sino-Japanese concern, operate a water-supply system at Newchwang. There is also a small waterworks at the Fushun Colliery operated by the South Manchuria Railway Co.

TRAMWAYS

There are no electric tramways in the district. One short horse-car line is in the city of Mukden, and it is expected that this will be replaced in the near future by an electric line using modern German equipment which has already been received by the municipal authorities. At the Fushun coal mines, a subsidiary enterprise of the South Manchuria Railway Co., 84 miles of electric railway is operated for carrying coal, sand, and passengers; 29 electric locomotives, 5 passenger cars, 11 trailers, 329 sand cars, and 29 other cars are used.

CONSERVANCY AND RECLAMATION WORKS

The conservancy of the Liao River, in southeastern Shengking Province, is under the supervision of a board composed of a Chinese official, the foreign consuls at Newchwang, the commissioner of customs, and representatives of Chinese and Japanese chambers of commerce at Newchwang. Two engineers have charge of operations, which are financed by a customs surtax levied on goods exported and imported, and by a tonnage tax on vessels calling at Newchwang,

which is at the mouth of the river. The board plans to increase these taxes in the future for the purpose of dredging the bar at the mouth of the river. If these plans are successful it is expected that ships of deeper draft will be able to call at Newchwang, and that the future expansion of the port will be stimulated. An American engineering company recently secured a large contract for dredging work planned by the conservancy board.

IMPORT AND EXPORT TRADE

According to the annual report of the consulate general at Mukden for 1924, the table below gives the value of the total foreign trade of Manchuria, by ports, for the years 1913, 1922, 1923, and 1924:

Ports	1913	1922	1923	1924
	<i>U. S. currency</i>	<i>U. S. currency</i>	<i>U. S. currency</i>	<i>U. S. currency</i>
Aigun.....	\$1,100,291	\$1,089,186	\$168,155	\$37,580
Harbin district.....	30,099,069	41,343,502	35,473,086	44,323,840
Hunchun.....	616,968	1,200,789	1,261,355	1,275,089
Lungchingsun.....	617,225	2,754,140	4,136,427	3,764,190
Antung.....	7,281,143	44,508,983	56,566,603	45,540,211
Dairen.....	42,889,608	132,064,711	150,070,164	164,255,831
Newchwang.....	13,819,825	11,350,027	13,044,662	12,030,562
Total.....	96,424,129	234,320,338	260,720,452	271,227,303

The following table indicates the advance in value of Manchuria's foreign trade, showing imports and exports separately (more detailed figures for the trade of 1924 are not yet available):

Years	Imports	Exports	Years	Imports	Exports
	<i>U. S. currency</i>	<i>U. S. currency</i>		<i>U. S. currency</i>	<i>U. S. currency</i>
1913.....	\$47,069,915	\$49,354,214	1923.....	\$99,383,487	\$161,336,965
1922.....	99,363,743	134,956,595	1924.....	102,423,386	168,803,917

While Dairen and Antung are not in the Mukden consular district, the greater part of the merchandise imported and exported through those ports finds a market or originates in Shengking (Fengtien) and Kirin Provinces. It is therefore necessary to analyze figures for those ports in making a commercial survey of the district. The total trade of South Manchuria has increased sharply during recent years. Exports from the three ports in 1923 amounted to \$184,591,630, United States currency, and imports amounted to \$135,861,999. The trade of Newchwang did not show a normal expansion in comparison with the newer ports of Dairen and Antung, which have direct communication with the South Manchuria Railway. The trade of Newchwang has gradually increased, however, because of its favorable situation at the mouth of the Liao River, the great natural means of transportation in South Manchuria, and further development of the port is expected.

The table below shows exports during 1913 and 1923 through the three ports of Newchwang, Dairen, and Antung. The figures for

1904 are for Newchwang only, because, at that time, Dairen and Antung were not developed as commercial ports:

[Value in haikwan taels; exchange value of tael: 1904, \$0.698 United States currency; 1913, \$0.7295; 1923, \$0.8231]

Products		1904	1913	1923
Bean cake.....	(piculs..	1,986, 172	13, 243, 222	25, 770, 523
.....	(value.....	3, 726, 485	28, 702, 280	61, 378, 656
Beans.....	(piculs..	1, 827, 309	3, 944, 833	14, 563, 338
.....	(value.....	4, 461, 044	10, 844, 960	44, 949, 243
Bristles.....	(piculs..	208	3, 296	5, 516
.....	(value.....	11, 885	273, 075	418, 674
Coal.....	(piculs..	.....	1, 451, 175	2, 638, 316
.....	(value.....	.....	6, 536, 590	17, 498, 371
Horsehair.....	(piculs..	128	2, 242	3, 886
.....	(value.....	.....	64, 899	140, 823
Iron, pig.....	(piculs..	.....	.....	1, 475, 743
.....	(value.....	.....	.....	2, 945, 193
Oil, bean.....	(piculs..	74, 104	695, 108	1, 952, 844
.....	(value.....	582, 459	5, 186, 768	15, 795, 932
Oils, vegetable.....	(piculs..	.....	15, 295	31, 725
.....	(value.....	.....	127, 240	269, 206
Seeds, hemp, sesame, etc.....	(piculs..	20, 160	437, 526	997, 571
.....	(value.....	155, 839	1, 427, 427	4, 839, 684
Silk, raw, and silk products.....	(piculs..	12, 806	199, 514	118, 755
.....	(value.....	2, 008, 310	5, 994, 150	19, 673, 042
Skins, furs, and hides.....	(piculs..	.....	.....	.....
.....	(value.....	36, 714	350, 201	619, 230

Exports of soy beans, bean cake, and bean oil have shown the greatest increases. Iron and coal have been mined with modern machinery during recent years—this fact accounting for their sudden appearance on the export list. The great increase in value of silk is a noteworthy feature. The exports of Manchurian raw products have in general shown a remarkable increase, due, in part, to the foreign traders who are gradually extending their activities in the district.

The following table shows, for 1923, the estimated percentages of the three principal exports going to the destinations indicated:

Articles	Japan	Great Britain	Hong-kong	Germany	Dutch East Indies	United States
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Bean cake.....	81.00	0.05	.....	.....	.....	0.5
Bean oil.....	.31	30.30	0.7	4.40	.....	18.3
Beans.....	58.00	2.80	2.0	66	9.2	.07

Except for bean products, there are no customs statistics showing the ultimate foreign disposition of exports from the district. It is estimated that 98 per cent of the pig iron goes to iron works in Japan. Coal is exported to Japan, Korea, French Indo-China, the Straits Settlements, the Philippine Islands, and ports in North and South China. A large percentage of the bristles and horsehair finds a market in the United States through direct shipment via England. Shipments of vegetable oils to the United States are also large. The following "declared export" figures show the

products appearing on invoices certified in the Mukden district for shipment to the United States during 1922 and 1923:

Articles	1922		1923	
	Quantity	Value	Quantity	Value
Furs, undressed:		<i>U. S. currency</i>		<i>U. S. currency</i>
Fox.....pieces.....	7, 538	\$28, 749	4, 626	\$55, 465
Kid.....do.....	16, 378	7, 070		
Lynx.....do.....			105	1, 919
Marmot.....do.....	1, 668	416	8, 748	7, 054
Rabbit.....do.....	115	27	3, 982	1, 334
Raccoon.....do.....	1, 284	6, 809	238	1, 490
Sable.....do.....	403	29, 928	669	53, 918
Sheep (dry).....do.....			1, 200	997
Squirrel.....do.....	181, 418	198, 439	20, 400	23, 638
Weasel (kolinsky).....do.....	146, 047	299, 300	82, 023	204, 209
Wolf.....do.....	315	2, 212	335	2, 099
Furs, dressed:				
Dog mats.....do.....	112, 185	173, 375	85, 731	211, 294
Mouflon (goat).....do.....	65, 352	105, 474	129, 782	257, 402
Sable.....do.....			19	360
Wool and hair:				
Goat hair.....pounds.....			5, 897	4, 733
Horsehair.....do.....	169, 671	119, 772	197, 720	158, 419
Bristles.....do.....	525, 120	754, 376	366, 813	525, 423
Miscellaneous.....do.....		445		657
Total.....		1, 726, 392		1, 510, 501

Exports from the district to the United States may be better understood by taking into consideration the following figures. The total declared exports to the United States from the whole of Manchuria amounted to \$12,004,477 United States currency during 1923. Of this amount, exports from the three southern ports of Mukden, Dairen, and Antung amounted to \$5,792,843. Considering only important products, the figures for Dairen show the following declared exports to the United States for the same period: Soy-bean oil, 44,713,226 pounds, valued at \$2,967,986; soy-bean cake, 26,008,790 pounds, or \$457,977; raw silk, 78,040 pounds, or \$265,716; perilla oil, 2,052,195 pounds, or \$249,386; peanut oil, 1,632,015 pounds, or \$139,635; millet, 2,843,152 pounds, or \$58,244; hempseed 1,758,338 pounds, or \$41,008. The figures for Dairen taken in conjunction with the above declared exports from Mukden give an approximate estimate of shipments to the United States, as the bulk of these goods originated in the Mukden district, although these figures should be modified somewhat because of shipments from the Harbin district through Dairen. Large volumes of furs and skins from the Harbin district make up a part of the Manchurian exports to the United States. There is, however, a considerable indirect export trade to the United States which passes through ports of transshipment such as Kobe and Shanghai, which does not appear on the declared-exports returns of consulates in Manchuria, and which is not included in the above estimates.

The table following shows the principal imports from foreign countries—the figures for 1904 applying to Newchwang only, while those for 1913 and 1923 include Dairen, Antung, and Newchwang.

[Values in haikwan taels]

Products		1904	1913	1923
Bags, all kinds.....	pieces..	2,997,700	12,215,465	23,629,142
	value..	288,871	1,484,582	4,259,567
Cotton piece goods:				
Shirtings, gray, plain.....	pieces..	150,742	363,958	848,278
	value..	453,246	1,132,855	5,588,230
Sheetings, gray, plain.....	pieces..	1,148,884	2,262,763	221,139
	value..	3,969,326	5,655,275	1,245,625
Shirtings, white, plain.....	pieces..	77,790	345,555	293,461
	value..	306,031	1,469,738	2,036,924
Shirtings, white, figured.....	pieces..	60	3,488	11,613
	value..	330	16,987	96,764
Drills.....	pieces..	454,711	458,702	180,895
	value..	1,743,331	1,749,522	1,020,974
Jeans.....	pieces..	139,480	496,500	1,094,320
	value..	391,773	1,496,667	5,215,410
T cloths.....	pieces..	4,125	38,244	49,556
	value..	6,110	69,559	197,663
Cambries, lawns, and muslins, white, dyed, and printed.....	pieces..	2,182	29,517	74,765
	value..	1,930	33,563	169,129
Lenos and balzarines, white, dyed, and printed.....	pieces..		751	1,166
	value..		1,313	7,930
Plain cotton prints and chintzes.....	pieces..	7,881	6,172	83,269
	value..	28,030	19,078	769,192
Fancy muslins.....	pieces..			3,163
	value..			1,017
Art muslins and cretonnes, unenumerated.....	pieces..			250,840
	value..			50,427
Printed drills, furnitures, and twills.....	pieces..	555	1,441	1,671
	value..	1,082	2,782	11,954
Printed crêpe.....	pieces..			840
	value..			3,621
Printed sateens, reps, etc.....	pieces..		528	2,697
	value..		1,728	24,249
Turkey red cottons and dyed T cloths.....	pieces..	6,649	30,422	170,157
	value..	15,774	60,832	633,763
Dyed cottons, plain, fast black, colored, and figured—Italians, venetians, poplins, lastings, and crêpe.....	pieces..	106,805	194,579	973,338
	value..	547,651	1,044,631	6,261,445
Shirtings, dyed, plain.....	pieces..	3,752	6,808	44,817
	value..	14,445	27,643	168,570
Shirtings, Hongkong-dyed, plain, and shirtings, dyed, figured, brocaded, and spotted.....	pieces..	2,042	480	
	value..	8,018	1,373	
Flannelettes.....	pieces..	45,848	54,102	87,807
	value..	168,830	181,726	565,435
Fancy woven cottons.....	yards..	11,184	321,706	
	value..	1,358	26,664	
Japanese cotton cloth.....	yards..		9,158,554	40,790,714
	value..		525,197	3,410,781
Velvets and velveteens.....	yards..	209,171	571,813	720,731
	value..	58,868	164,167	416,884
Crimps and crêpons.....	yards..			97,525
	value..			31,422
Japanese cotton crêpe.....	yards..			313,775
	value..			38,112
Cotton blankets.....	pieces..	202,435	460,637	113,167
	value..	117,622	207,133	112,240
Cotton handkerchiefs.....	dozens..	33,184	96,621	119,934
	value..	14,825	25,850	69,757
Cotton towels.....	dozens..	172,756	394,546	46,679
	value..	73,809	168,901	51,781
Cotton goods, unenumerated.....	yards..		58,428,716	1,848,612
	value..	10,649	3,025,390	343,801
Do.....	piculs..			1,088
	value..			61,173
Cotton yarn.....	piculs..	156,320	133,302	115,635
	value..	3,946,071	3,465,544	5,581,380
Cotton yarn, gassed, dyed, or mercerized.....	piculs..			10,499
	value..			703,752
Cotton thread, balls and spools.....	piculs..	25,444	103,741	243,385
	value..	66,000	266,830	376,727
Dyes, paints, and colors.....	value..	144,597	1,388,775	2,732,226
Electrical material and fittings.....	do..		333,342	1,923,975
	value..		708,055	1,212,662
Flour, wheat.....	piculs..	77,969	3,018,616	5,763,113
	value..	292,380	34,290	87,498
Iron and steel manufactures.....	tons..	2,845	1,821,976	6,735,842
	value..	430,465	18,190,220	16,033,281
Kerosene and lubricating oil.....	gallons..	4,762,640	2,388,419	5,490,472
	value..	937,542	64,984	658,818
Locomotives and tenders.....	do..		647,301	4,028,966
Machinery and tools.....	do..	5,952	467,376	1,216,307
Medicines and chemical products.....	do..			2,330,658
Paper and cardboard.....	do..		675,575	

[Value in haikwan taels]

Products	1904	1913	1923
Railway materials not otherwise classified..... value..			1,250,597
Railway cars..... do.....		116,698	432,677
Sugar..... piculs..	233,469	365,739	511,298
..... value..	1,093,232	1,852,731	4,019,962
Tobacco, cigars, and cigarettes..... value..	497,225	1,198,210	7,035,354
Vehicles:			
Automobiles..... do.....		9,851	133,478
Motor cycles..... do.....			6,276
Bicycles, velocipedes, etc..... do.....		46,152	126,299
Traction and road engines..... do.....			10,093
Other vehicles..... do.....		106,511	102,966
Woolen goods, blankets and rugs, broadcloth, suitings, flannel, etc..... value..	205,379	386,797	1,856,171

The above figures are for important products imported from foreign countries. The total foreign imports through the three ports during 1923 amounted to 119,381,893 haikwan taels, or \$98,263,-236, United States currency. Imports from Chinese ports were valued at 45,679,460 taels, making a grand total of 165,065,353 taels.

During 1923 Chinese cotton products, chiefly sheeting and yarn, imported through Dairen from Chinese ports and forwarded to the interior by railway amounted to 3,343,421 haikwan taels. Similar imports through Newchwang and Antung had a value of 12,734,365 and 184,403 taels, respectively, giving a total of 16,262,-209 haikwan taels, or approximately 31 per cent of cotton imports into the district through the southern ports of Manchuria. Points of origin of cotton products imported are estimated to be as follows: Chinese manufactures from other parts of China, 31 per cent; English and Indian manufactures, 4 per cent; Japanese manufactures, 64 per cent; from the United States, 1 per cent.

The most noteworthy feature in connection with cotton imports is the steadily increasing volume of Chinese manufactures, which are in part supplanting cotton goods from adjacent countries.

Other important Chinese manufactures imported during 1923 were soap, beer, paper, matches, biscuits, cement, and candles.

As regards foreign products, 5,201,897 gallons of American kerosene were imported through Newchwang during 1923, and 8,393,363 gallons were imported into the interior through Dairen. Adding 722,330 gallons from Antung, one finds that imports of kerosene from the United States formed approximately 89 per cent of the total imports of that commodity through the three ports. It is estimated that more than 90 per cent of the flour originated in the United States and Canada, and the bulk of the tobacco came from the United States. A large percentage of the imported railway materials, electrical equipment, iron and steel products, and machinery came from the United States, Great Britain, Germany, and Japan. Imports of woolen goods from the United States were small. Practically all bags (chiefly gunny sacks for beans) were imported from British India and Japan.

Through careful cultivation, American dealers in kerosene, electrical machinery, plumbing supplies, railway materials, agricultural machinery, roofing, construction materials, etc., have built up a substantial trade in this market. Persistence and the ability to appreciate the increasing demand in China for foreign products

were the reasons behind this success. Competition is keen in nearly all lines. European manufacturers are making a strong attempt to extend sales in the district through exceptionally long credits—often from three to four months—and through intensive sales programs.

In cotton and woolen textiles, the low scale of living of the natives demands products of rather cheap grade. As large quantities of such articles are produced in adjacent countries, American manufacturers should cultivate the market with this point in mind.

It is believed that manufacturers should send representatives to go over the field, establish personal connections, determine the suitability of their products, and convince themselves that American products may be sold in Manchuria.

INTERNAL TAXES

Foreign goods which have paid import duty at the port of entry and are intended for transshipment to ports open to foreign trade in Manchuria are entitled to an exemption certificate which protects them from further taxation en route or at the point of destination. If the goods are intended for transshipment to the interior—that is, to places not a treaty mart—the owner has the option of paying the inland taxes or “likin” en route, or of paying half the import duty additional, not exceeding a nominal $2\frac{1}{2}$ per cent ad valorem, and obtaining a “transit pass.” This certificate exempts the goods from all further inland charges and is widely used by foreign companies. Goods imported into Manchuria from or through Chosen (Korea), by rail via Antung, and exported from Manchuria to or through Chosen by rail via Antung, are entitled to one-third duty reduction. The transit dues on goods coming under the one-third duty reduction privilege and conveyed to the interior of Manchuria are one-third the customs duty—that is, one-half of the import duty paid.

MONEY, BANKING, AND CREDIT

BANKS

Following is a list of the leading banks in the Mukden consular district that handle foreign exchange and bills:

Name of bank	Nationality	Capital	Head office	Branches
Yokohama Specie Bank.	Japanese	100,000,000 yen	Yokohama	Mukden, Newchwang, Changchun, Kaiyuan.
Bank of China	Chinese	\$60,000,000 silver	Peking	Mukden, Changchun, Kirin, Newchwang, Taonan, Tung-huag, Liaoyuan, Kungchuling, Kaiyuan.
Bank of Chosen	Japanese	80,000,000 yen	Seoul	Mukden, Newchwang, Changchun, Liaoyang, Lungchingtsun, Kirin, Tieling, Chengchiatun Ssuninghai, Fuchiatun.
Russo-Asiatic Bank		35,000,000 rubles	Paris	Newchwang, Changchun.

LOCAL CURRENCY

The local currency consists of Yuan silver dollars, Bank of Chosen gold notes, Yokohama Specie Bank silver notes, Fengtien paper currency (Kung Tsi Bank notes), Bank of Communications notes, Bank of China notes, and notes of the Bank of Manchuria. The Yuan dollar normally exchanges for about \$0.50 United States currency. Bank of Chosen gold notes are redeemable in Japanese gold yen or notes of the Bank of Japan and usually follow the exchange value of Japanese gold yen. The Yokohama Specie Bank silver notes are payable in Japanese silver yen. In addition, there are subsidiary copper and silver coins.

Fengtien paper notes form the medium of exchange for nearly all native business transactions and are issued at Mukden by the Kung Tsi Bank (a subsidiary of the Bank of Manchuria), being guaranteed by the local authorities. They have a normal exchange value of approximately \$0.35 United States currency. The notes are issued in denominations of 100, 50, 20, and 10 coppers, being on a copper basis. They are known as "feng p'iao," having replaced to a great extent the former feng p'iao silver notes.

Notes issued by the other Chinese banks mentioned are referred to as "big money currency" and have a fixed value with the Kung Tsi Bank notes, \$1 being converted at 1.20 feng p'iao. These notes are also in general circulation.

Bank of Chosen gold yen notes are legal tender in the South Manchuria Railway zone. The amount of these notes in circulation throughout Manchuria is very large, a total of 110,000,000 yen being issued by the bank for circulation in Korea and Manchuria.

CREDITS

Local credit conditions, as related to direct trade with the United States, do not differ greatly from American business procedure. Imports are usually handled through one of the local exchange banks, goods being shipped for delivery against payment, or acceptance of drafts drawn for payment at sight, or in 30, 60, or 90 days, quoting prices c. i. f. Dairen, Newchwang, or Mukden. The customary period of credit is from 60 to 90 days after acceptance of draft, making the terms comparatively long. Very long terms are generally demanded by native buyers from the local traders, necessitating in many cases a slight extension of terms by the manufacturer or jobber in the United States. It is suggested that payment within a period of 30 days should not be insisted upon when the standing of the firm is believed to be beyond question.

Exports are usually made against a letter of credit handled through one of the local foreign-exchange banks, a draft being drawn when documents are handed to the bank. It is believed that American firms should not demand confirmed bankers' credits. There is a sentiment in Manchuria against this form of financing, and, in addition, the Japanese banks, with which many firms deal, do not open such credits. Until such time as there are American or European banks in Mukden and Newchwang, whereby financial transactions with the United States may be facilitated, great care should be taken to arrange terms which local importers and exporters find it convenient to meet.

TRADE ORGANIZATIONS

Trade organizations and addresses in the district are as follows (in correspondence streets and numbers are not necessary) :

American Association of Mukden, China (although not strictly commercial, trade matters are facilitated).

Newchwang Chamber of Commerce, Newchwang, China (international).

British Chambers of Commerce, Mukden and Newchwang.

Japanese Chambers of Commerce, Mukden, Newchwang, Tiehling, and Newchwang.

Chinese chambers of commerce, Mukden (as there are several Chinese chambers at Mukden it is advisable to address correspondence to the Mukden General Chamber of Commerce, South of Bell Tower, Mukden), Tiehling, Liaoyang, Fakumen, Hsinmin, Liaoyuan, and Taonan, China.

In addition to the organizations given above, which are at points where foreigners may reside for purposes of trade, there are 65 Chinese chambers of commerce at cities and towns in Shengking (Fengtien) Province and several others in Kirin Province within the Mukden consular district, a list of which may be obtained from the Mukden consulate general. The Chinese chambers exert considerable influence over the commercial and political affairs of their districts.

PROPERTY VALUES AND RENTS

Within the section set aside for the use of foreigners in Mukden and Newchwang there are no office buildings built especially for the purpose. Foreign firms in these sections either rent dwelling houses which are adaptable as offices or construct suitable buildings on perpetual-lease property. Rents for medium-size, eight-room, foreign-style houses in Mukden range from \$75 to \$100 gold per month. Small compounds containing three or four small Chinese-style houses usually rent for about \$75 gold per month. Warehouse space in Chinese buildings costs approximately \$4 gold per chien (1 chien equals about 150 square feet) for one month. If a firm desiring to establish a branch in Mukden finds such facilities impracticable, or if a larger building is desired on a rental basis, it should be able to arrange for the construction of quarters which would be suitable for offices. If a long lease is taken, the office might be planned according to the special requirements of the firm. A building built on this plan with about 2,500 square feet floor space, about an acre of ground, and suitable warehouse space, would rent for approximately \$200 gold per month. Large Chinese-style houses are also occasionally available at the same figure.

Perpetual-lease property in Mukden varies in price from \$1,200 to \$1,500 gold per mow (one-sixth of an acre). The taxes on such property are nominal, amounting to \$1 gold per mow a year. There are no other Chinese property taxes to which foreign firms are subject.

Firms may secure from the consulate general at Mukden the names of real estate and property owners, with whom preliminary dealings may be had. It is desirable, however, to have a representative of the firm make local investigations before property is rented or purchased.

LIVING COSTS

The following statement indicates ordinary living costs in this consular district:

[Figures in United States currency]

	Hotel board and room per month	Boarding houses ("pen- sions")	House rent	Estimated necessary living expenses
Single man.....	\$138	\$88	\$75	\$100 to \$250
Single woman.....	138	88	75	100 to 250
Married couple.....	226	160	85	250 to 350

The above hotel rates are based on the charges of the South Manchuria Railway hotel at Mukden, figuring the yen at \$0.42 United States. Under normal exchange (\$0.49 United States) rates would be somewhat higher. Transportation is usually by rickshaw or carriage. Rickshaw hire is about \$0.20 United States currency per hour and carriage hire about three times this amount. Motor hire is approximately \$3 per hour.

Most established commercial units have "messes" for single men whereby rent, food, servant costs, coal, light, etc., are minimized and living is made more economical than in hotels or boarding houses. It is estimated that a "mess" composed of a group of five persons should not cost each individual more than \$80 United States currency per month. There are foreign-style houses, available for married couples with children, which should cost not more than \$250 United States currency per month for rent and subsistence, and many houses may be maintained on a less expensive basis. The above figures are exclusive of entertainment expenses.

Lack of educational facilities in the district necessitates home instruction or the services of a governess, although it is possible that an international school for foreign children may be established. The plan is now under consideration by the members of the foreign community.

There is an international club in Mukden which provides recreational facilities. The initiation fee is \$25 United States currency, with monthly dues of \$6. There are no serious difficulties in connection with living conditions in Mukden which would prohibit the carrying on of business under favorable circumstances.

SHANGHAI CONSULAR DISTRICT

By Consul General Edwin S. Cunningham

LOCATION AND AREA

The Shanghai consular district comprises all of Chekiang Province and that part of Kiangsu Province south of the Yangtze River, except two prefectures and the island of Tsungming. It lies between 118° and 122° east longitude and between 27° and 31° north latitude—corresponding roughly to the position of southern Louisiana. The total area of the district is approximately 49,537 square miles, a little more than that of New York.

The average temperature throughout the district is around 62° F., with a variation of from 10° to 15° in winter and with the thermometer ascending as high as 105° F. in summer. Seasonal changes are very abrupt, there being but little spring and autumn. The rainfall averages 51 inches per annum and is fairly evenly distributed. In general, the climate is humid but healthful.

POPULATION

The Chinese Maritime Customs estimates the population of the Shanghai consular district at about 25,000,000, in which are included about 30,000 Japanese and 15,000 foreigners of other nationalities. The estimated number of Americans is 3,718, of whom 522 are at outports or in the interior. There are 164 American firms registered with the consulate general at Shanghai and probably 20 more not registered. In the outports the only American firms are the large tobacco and oil companies, whose branches and agencies are to be found throughout China, and the agents of certain large export houses.

CITIES

The population of Shanghai is 1,500,000. Four other treaty ports in the district, in which foreigners reside and carry on trade, are Hangchow, population 600,000; Soochow, 500,000; Ningpo, 465,000; and Wenchow, 100,000. There are several cities of considerable importance not yet opened to foreign trade, among these being Wusih and Nansiang, both in the same district.

Hangchow and Soochow are important silk centers and of considerable value in the tea trade. Ningpo exports a great deal of tea and is an important market for fish. Hangchow and Ningpo divide between them practically all the foreign imports which reach Chekiang Province, except a small amount which passes through Wenchow, a port once well known in the green-tea trade, but which in recent years has lost its importance.

AGRICULTURE AND FISHING

With the exception of the city of Shanghai itself, agriculture is the principal interest of the people of the district. The dense population—about 450 persons to the square mile—compels intense cultivation of every foot of the ground. In order of their importance the principal crops are rice, beans, cotton, seeds, wheat, tea, silk, and vegetables (of which cabbage is the one principally cultivated). There are no figures by which to estimate the annual agricultural production of the district, but it is very nearly sufficient to support the immense population. There is also a large animal industry, which produces pork, poultry, and a certain amount of water-buffa¹o beef. Foreign cattle have been introduced but not extensively raised.

Fishing is a universal industry. The coast line is intensively worked, deep-sea fishing employs thousands, and the rivers and canals which cover the district like a network produce immense quantities of food fish.

MINERALS AND MINING

There are minerals in the district, but the deposits discovered so far have been in the nature of placer "pockets," of no commercial importance.

MANUFACTURING¹

Shanghai, because of its central location and position as China's premier shipping port, has drawn to itself a great deal of capital invested in manufacturing industries, and it is believed that this represents the largest concentration of capital anywhere in China. Undoubtedly Shanghai and the district immediately surrounding it form the principal industrial center of the country. Manufacturing and production statistics, however, are almost completely lacking. While the Shanghai consular district is in a more advantageous position with respect to data regarding certain groups of manufactures, such as cotton and flour, it really forms no exception to this general rule. The vast amount of manufactured products for purely native purposes, from industries carried on throughout practically the whole district, as in other parts of China, falls almost entirely outside the range of accurate statistics or even of reliable estimates.

In view of this situation it would be unwise and misleading to attempt to guess the actual amount of capital invested in manufactures, great and small, in this district. The following remarks undertake, therefore, to enumerate only such facts as are known, with such deductions as may be reasonably drawn from them.

COTTON MANUFACTURE

The most important manufacturing industry in the Shanghai consular district is that of cotton manufacture. Approximately 67.5 per cent of all the cotton spindles in China are concentrated in this district. On June 30, 1924, the total number of spindles in China, either completed or under construction, was 3,691,000; Shanghai's

¹ The data under the heading "Manufacturing" are the contribution of Trade Commissioner George C. Howard, Shanghai.

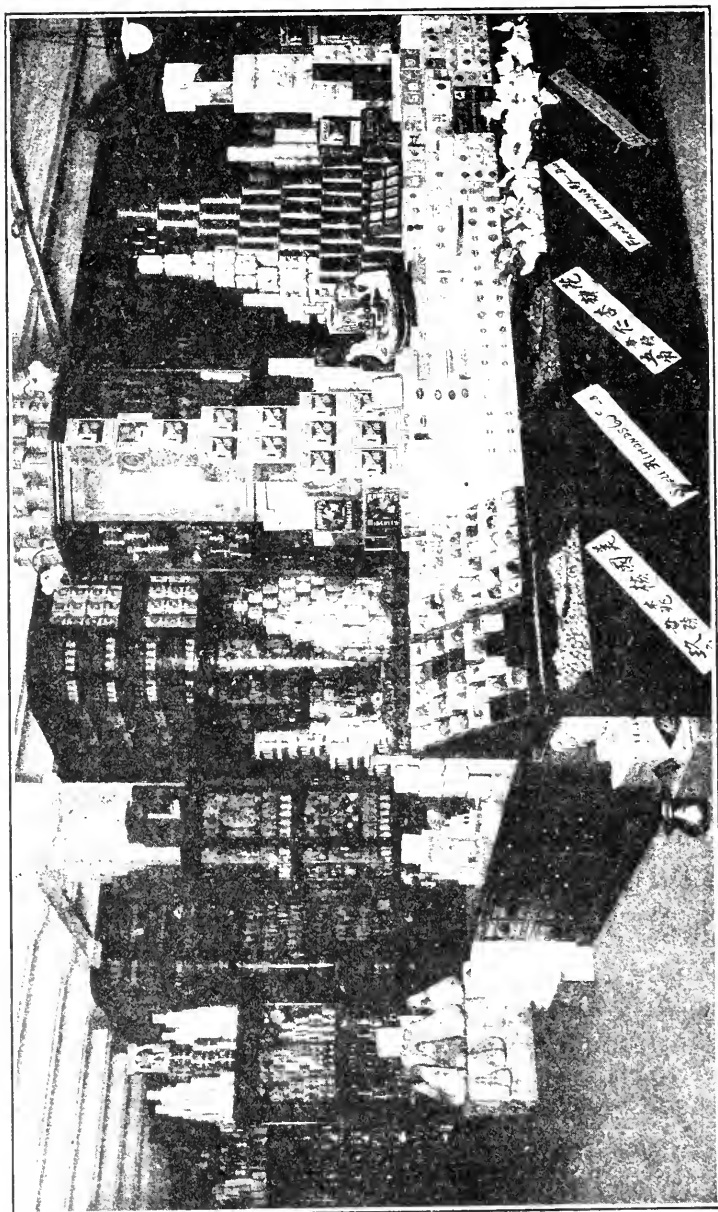


FIG. 17.—Grocery department of a Shanghai department store

share at that date was 1,715,000 spindles in operation and 316,000 under construction. The average output of yarn in China's mills is 1 pound per day per spindle. On this basis the producing capacity of the mills in this district may be estimated at 1,715,000 pounds per day.

Weaving has also made rapid strides in Shanghai, and on June 30, 1924, there were 11,200 power looms in operation and 4,160 under construction. Theoretically these looms are capable of weaving annually 233,328,000 yards of cloth of 50 picks per inch, but the actual output can not be definitely ascertained. In addition to spinning and weaving, there are 14 cotton-ginning mills with 831 machines; 6 thread factories; 34 weaving and dyeing plants not included in the above; and 16 knitting mills and hosiery and underwear factories.

Numerous other small factories exist, but exact statistics concerning them are not obtainable.

SILK MANUFACTURE

Next to the cotton industry is that of silk manufacture. Shanghai has 73 silk filatures and Wusih 23 additional. There are also some 25 silk-weaving mills of considerable importance and an indefinite number of smaller shops where silk is woven into various fabrics. In 1923 Shanghai exported 25,823 piculs of raw silk, 17,690 piculs of silk piece goods, 78,120 piculs of waste silk and cocoons, and sundry silk manufactures to the value of 17,064 haikwan taels.

FLOUR MILLING

Of the flour-milling capacity of China (65,525 barrels per day), 45 per cent is concentrated in the Shanghai consular district. Shanghai mills have a daily capacity of 25,100 barrels and Wusih mills a capacity of 4,600.

SHIPBUILDING AND ENGINEERING WORKS

Shanghai possesses 29 concerns within this category of sufficient size to be considered important. Engineering works produce a wide range of machinery, including everything from textile machinery and tools to steam and oil engines, modern boilers, and similar heavy equipment. Shipyards are capable of turning out vessels of every size, from small tugs to 10,000-ton ocean-going ships. Innumerable small builders, unrecorded, build Chinese water craft of many kinds.

CIGARETTES

Cigarette manufacture has assumed important proportions in this district during the past decade, but statistics of actual output are indeterminate. China's total cigarette manufacture is estimated at 40,000,000,000 per year, of which probably 75 per cent is turned out by the seven large and several small factories operating in Shanghai.

OIL MILLS

About 30 oil mills in the Shanghai district extract oil from cotton-seed, rapeseed, groundnuts, etc. No statistics are available as to

their capacity or output. Vegetable-oil exports through the port of Shanghai during the year 1923 were as follows:

	Piculs		Piculs
Bean oil-----	1, 237	Linseed oil-----	2, 659
Camphor oil-----	1, 135	Rapeseed oil-----	6
Castor oil-----	372	Sesamum-seed oil-----	211
Cottonseed oil-----	14, 820		
Groundnut oil-----	232, 934	Total-----	253, 374

ELECTRIC LIGHT AND POWER PLANTS

The number of electric light and power plants in the Shanghai district has grown rapidly in common with the rapid spread of electric-power use all over China. There are about 95 electric light and/or power plants in the district, with a rated total capacity close to 150,000 kilowatts, this constituting about 25 per cent of the number of plants in China and approximately 40 per cent of their total generating capacity. The largest plant is operated by the Shanghai Municipal Council, which had an installed plant capacity in 1923 of 121,000 kilowatts.

MATCH FACTORIES

The match industry has also grown rapidly in recent years. The estimated output of the 20 good-sized factories operating in the district is 350 cases of 7,200 packages each per day.

CEMENT AND BRICK WORKS

The growing use of concrete and steel construction is building up an important manufacture of cement. Three principal factories have a daily output of 3,200 barrels of Portland cement, and smaller concerns probably increase the total to 3,500 barrels. Bricks, said to be equal to the average brick made in western countries, are manufactured for both Chinese and foreign construction in the native kilns located throughout the district.

EGG PRODUCTS

There are about 20 important factories in the district turning out dried, liquid, and frozen egg products to the amount of 15,000 tons per annum. The following figures show the gross exports of egg products through the port of Shanghai for 1924: Egg albumen, dried and moist, 84,944 piculs, and egg yolk, dried and moist, 247,540 piculs, the value of these two items being 12,521,308 haikwan taels; eggs, fresh and preserved, 254,527,000, 2,702,735 haikwan taels; eggs, frozen, 112,768 piculs, 2,480,896 haikwan taels.

TANNERIES

There are about 20 tanneries in the district, the majority operated by Chinese, using antiquated methods for producing leathers employed in the manufacture of native shoes, suitcases, trunks, and harness. One of the largest tanneries, however, is under foreign operation, with modern methods, and has a production capacity of 100,000 pounds of good-grade sole leather per month.

IRON AND STEEL

Shanghai has one modern plant, operated jointly by Chinese and foreign capital, with a capacity of 50 tons per day. Its entire output is sold to the local market. In addition, one of the large dockyards operates a 1½-ton two-carbon electric furnace, products of which are used for their own manufacturing purposes.

AERATED WATER

There are three large aerated-water factories in Shanghai, with a combined yearly output of 3,500,000 bottles, besides distilled water widely used for drinking purposes.

ELECTRICAL EQUIPMENT

The largest single item of electrical equipment in this district is electric lamps. These are made in both tip and tipless types, vacuum and gas filled. The next largest item is probably batteries—dry, wet, and storage—the total capacity of Shanghai plants being in the neighborhood of 10,000 per month.

A limited number of electric motors are manufactured by one or two plants, and it is possible to buy a 5 to 50 horsepower squirrel-cage type of motor at approximately 50 per cent of the price of a similar size in America.

Some manufacturing of transformers, precision instruments, switchboards, electric wires, motors, etc., electric-light fixtures, glass shades, and bowls for lighting is also done.

A full line of wiring devices is made locally, as is also a considerable quantity of porcelain insulators.

This industry has not reached a point where it can supply more than a very small portion of the demand, and the majority of electric equipment is imported.

YEAST

A plant for the manufacture of yeast was completed in Shanghai in 1923. This plant is completely self-contained and has a capacity of 1,500 kilos of compressed yeast per day. This plant supplies yeast for local requirements and likewise exports to near-by points.

BREWERIES

The annual consumption of beer in the international settlement of Shanghai has been estimated as amounting to nearly 4,000,000 bottles. A large part of this is imported, but there is one brewery with a yearly output of some 4,500,000 bottles, supplying the local market and also shipping to various parts of China.

[A list of the principal factories in and around Shanghai accompanies this report, and may be obtained from the Bureau of Foreign and Domestic Commerce on application.]

LABOR CONDITIONS

Chinese labor is in a transitional stage, groping for something better and not sure of its goal. In some of the larger industries

workers have been organized into labor unions, as yet in the experimental stage. Wages are low in comparison with the United States, but extremely high compared with rates prevailing in other cities in China. The higher cost of living in Shanghai for the Chinese population is largely responsible for this condition.

Child labor is common, although the Shanghai municipal council prohibits the employment of children under 14 years of age. Foreign-owned factories have attempted improvements in the conditions of their employees, and in many cases the Chinese employers are following their example. Outside the international settlements, where the old apprentice system is in full operation, the labor conditions are as might be expected.

Estimates as to the relative efficiency of Chinese labor vary greatly. In general, it seems to be agreed that the Chinese laborer has an efficiency rating of about 25 per cent compared with that of an American laborer in the same class. In certain industries Chinese labor is considered equal to that in the United States, but such instances are exceptional.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

A marvelous system of waterways, which provides both local and through transportation to the interior of central and western China, is the chief reason for Shanghai's preeminence as a port. Local territories are reached by an intricate system of canals, of an average depth of 4 feet, over which lighters and steam launches transport the cargo produced by and necessary for a population of 25,000,000 people. In the neighborhood of Shanghai are the following waterways:

Whangpoo River.—30-foot draft from Yangtze mouth to Shanghai. Provides steam-launch service to Soochow through its upper reaches and connected canals.

Yangtze River.—25-foot draft to Hankow in high-water season; 10-foot draft all year. Steamer traffic 1,800 miles into heart of west China. Connects through rivers and canals with central China districts both north and south of the river.

Soochow Creek.—4-foot channel to Soochow and Hangchow via Grand Canal. Grand Canal connections to Chinkiang. Grand Canal connection Chinkiang to Tientsin under favorable conditions.

Local canals.—Estimated 3,500 miles of navigable waterways, average draft 4 feet. Different levels not locked but connected by chutes or "haulovers."

Coastwise routes link Shanghai with the entire coastal area. Regular services are conducted by both foreign and Chinese companies, which provide steamship and sailing-vessel communication with treaty and nontreaty ports. Shanghai is the transshipping point for coast ports as far north as Weihaiwei and to southern Fukien in the other direction. Schedules of passenger and freight tariffs in force over these routes and on the Yangtze appear below.

LOCAL STEAMSHIP PASSENGER FARES

Shanghai to—	One way	Round trip	Shanghai to—	One way	Round trip
	<i>Mex.</i>	<i>Mex.</i>		<i>Mex.</i>	<i>Mex.</i>
Amoy.....	\$65	\$95	Kiukiang.....	\$45	\$65
Antung.....	50	75	Nanking.....	18	28
Canton.....	85	130	Newchwang.....	65	100
Chungking.....	230	345	Ningpo.....	7	10
Chefoo.....	55	85	Swatow.....	65	95
Changsha.....	80	120	Shasi.....	90	140
Chinwangtao.....	60	90	Tientsin.....	90	140
Chinkiang.....	16	24	Tsingtao.....	35	56
Dairen.....	50	80	Wuhu.....	25	35
Foochow.....	30	48	Wanhsien.....	240	365
Hankow.....	50	75	Wenchow.....	40	70
Ichang.....	135	200			

LOCAL STEAMSHIP FREIGHT RATES—GENERAL CARGO

[Per ton of 40 cubic feet, or 2,000 pounds]

Shanghai to—	Shanghai taels	Shanghai to—	Shanghai taels	Shanghai to—	Shanghai taels
Chinkiang.....	2.20	Tsingtao.....	3.85	Ningpo.....	3.30
Nanking.....	3.00	Chefoo.....	3.85	Swatow.....	5.00
Kiukiang.....	3.85	Weihaiwei.....	3.50	Amoy.....	5.00
Wuhu.....	3.00	Tientsin.....	4.40	Hongkong.....	5.50
Changsha.....	7.65	summer.....	6.60	Canton.....	6.60
Hankow.....	3.85	winter.....	6.00	Singapore.....	7.00
Ichang.....	12.10	New.....	6.00	Manila.....	5.00
Shasi.....	12.10	chwang.....	4.00		
Wanhsien.....	142.10	Dairen.....	6.00		
Chungking.....	152.10	Antung.....	5.50		

¹ Normal.

RAILWAYS

Shanghai is deficient in railway transportation facilities, there being a total of only 421 miles of railway in the consular district, as follows:

	Miles
Shanghai-Nanking Railway.....	193
Shanghai-Hangchow-Ningpo Railway:	
Shanghai-Zahkou.....	159
Ningpo-Paikuan.....	48
Shanghai-Woosung.....	11
Shanghai-Belt Line.....	10

An excellent passenger service between Shanghai and Peking is maintained over the Shanghai-Nanking Railway, which connects at Nanking with the Tientsin-Pukow Railway, the southern terminus of which is reached by ferry across the Yangtze River. Both freight and passengers are at present transferred, because of the lack of car ferries, but this condition is expected to be remedied in the near future.

Freight rates on the Shanghai-Nanking Railway and Shanghai-Hangchow-Ningpo Railway are: Per metric ton of 1,000 kilos at "owner's risk," average per kilometer, \$0.04 Mex.; carload rates (15 to 40 metric tons), average per kilometer per carload, \$0.45 Mex. These rates are averaged as to classification and size of carloads. There are six classifications, with special tariffs for "high values," "dangerous," "vehicles," and "livestock."

Passenger tariffs of these railways are shown below.

Shanghai to—	First class	Second class	Third class
	<i>Mer.</i>	<i>Mer.</i>	<i>Mer.</i>
Soochow.....	\$3.00	\$1.50	\$0.75
Nanking.....	9.00	4.50	2.25
Hangchow.....	4.90	2.95	1.75
Ningpo-Paikuan.....	2.05	1.25	.75

ROADS

Within the boundaries of what might well be called Greater Shanghai, including both the French and international settlements and certain sections of the adjoining Chinese territory, there are in all about 260 miles of modern highways. In addition, there are four roads connecting Shanghai with near-by towns; these are the forerunners of an extensive road system which the increasing use of motor transport is demanding and which will be built before many years have passed.

The Yangtzepoo-Point-Woosung Road parallels the Whangpoo River from Shanghai to Woosung at its mouth, a distance of 14 miles. Liuho, about 27 miles to the northwest of Shanghai, is reached by a very good cinder road, constructed by a Chinese firm which operates a bus line over it. A dirt road, 15 miles in length, leads out to Minghong, a city located nearly due south from Shanghai on the Whangpoo. The road is destined to become the first section of a projected line between Shanghai and Hangchow, the capital of Chekiang Province.

From the Pootung side of the Yangtze River, reached from Shanghai by the Tunkadoo Ferry, a road runs southeast to Chowpu, a market town some 20 miles from Shanghai.

METHODS OF TRANSPORTATION IN SHANGHAI

Despite the advent of the motor car the rickshaw continues to be the most popular of all methods of personal transport. It has been predicted time and again that its days are numbered in this community, but this does not appear to be confirmed by actual conditions. Rickshaw transportation, however, is not cheap, and the crowded conditions of the streets do not make it especially safe.

Cargo is transported about Shanghai by hand carts, wheelbarrows, and by carriers. It is estimated that an army of 40,000 carriers is constantly employed in the "godowns" (warehouses) and along the water front of the port. Mechanical handling is in its infancy, practically all cargo being handled by manual labor once it leaves the ship's tackles. The increasing cost of labor, however, due to the higher prices of food and other necessities, is bringing closer the time when machinery must be installed to relieve present conditions.

AVERAGE COSTS OF TRANSPORT

The following table indicates the costs of transport in the Shanghai district per ton-mile:

Methods of transport	Long haul	Short haul	Methods of transport	Long haul	Short haul
	<i>U. S. currency</i>	<i>U. S. currency</i>		<i>U. S. currency</i>	<i>U. S. currency</i>
Canal boats	\$0. 0073	\$0. 0293	Trucks alone		\$0. 20
Carry coolies .....	. 44	1. 21	Trucks and trailers	\$0. 0788	. 1010
Wheelbarrows .....	. 1687	. 1687	Steam wagons .....	. 0422	. 0564
Hand carts .....	. 0773	. 0773	Rail transport ¹ .....	. 0057	. 0197

¹ In arriving at the average cost per ton-mile for long and short hauls the freight tariffs of the Shanghai-Nanking and Shanghai-Hangchow-Ningpo Railways have been treated as follows: First, the six classifications have been averaged for a 30-metric-ton carload for a distance of 350 kilometers for a long haul and 20 kilometers for a short haul. These average costs per 30-ton carload have been reduced to the cost per metric-ton kilometer. Then, considering a metric ton to be 2,204.6 English pounds and a kilometer to be 0.621 mile, these average costs have been converted to costs per English ton-miles in "Mexican" currency, which have in turn been converted to United States currency at the rate of \$0.5365.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The telegraphs are controlled by the Chinese Board of Communications in Peking through the Department of Telegraphs, in which there are several experienced foreign officer. In the Shanghai consular district there are stated to be 69 telegraph offices with approximately 2,136 miles of overland wires. Rates are as follows:

Intraprovincial messages, per word:	Mex.
Chinese	\$0. 06
English .....	. 09
Interprovincial messages, per word:	
Chinese .....	. 12
English .....	. 18

Adequate cable service to all parts of the world is provided by the following companies: Great Northern Telegraph Co.; Commercial Pacific Cable Co.; Imperial Japanese Telegraph Office; Eastern Extension, Australasia & China Telegraph Co. (Ltd.)

Rates to New York, San Francisco, and London are: To New York, per word, \$0.95 United States currency; to San Francisco, \$0.85; to London, \$0.725.

Radio communication has been delayed in this country because of certain semipolitical considerations which have yet to be overcome. At present there are the following stations in Shanghai: French station at Siccawei, accepting commercial messages up to 1,000 miles; Chinese station at Woosung; Chinese station in Shanghai, for Government purposes only.

TELEPHONES

In the Shanghai consular district there are telephone systems in the following places: Shanghai, Hangchow, Soochow, Ningpo, Wenchow, Kunshan, Kashing, Shaohing, Wusih, and Changchow. Shanghai is served in the foreign settlements by the Shanghai Mutual Telephone Co. (Ltd.), a British concern, whose rates are 65 taels per annum.

The Chinese Government Department of Communications maintains a telephone service in the areas adjoining the foreign settlements and is connected up with the village of Liuho, about 26 miles to the northwest of the city, and with a military post a few miles to the southwest. The rates for this service are \$36 Mex. per annum. Unfortunately there is no connection between the two services.

POSTAL FACILITIES

Foreign post offices, in accordance with the agreement reached at the Washington Conference, were technically withdrawn on January 1, 1923. The American post office ceased to function as soon thereafter as the accounts and returns could be completed. Since that date American mail has been handled by the Chinese post office with considerable efficiency.

Between Shanghai and the United States a steamship service is maintained by an American line of steamers. Other lines maintain regular service requiring several days' greater length of time in transit between Shanghai and the Pacific coast. International postal rates for American mail are maintained.

An efficient Chinese coastal service is maintained with great frequency. To the interior the service is through the Shanghai-Nanking Railway, and to the south, as far as Hangchow, through the Shanghai-Ningpo-Hangchow Railway.

SHIPPING AND WAREHOUSING FACILITIES

OCEAN STEAMSHIP SERVICES

Regular steamship services connect Shanghai with all the important ports of the world by direct sailings. The following lists show freight and passenger tariffs to the more important points. Freight is handled by passenger liners and also by tramp-steamer services, the volume of traffic of the latter depending upon cargo offering and being, in consequence, seasonal.

OCEAN STEAMSHIP PASSENGER FARES

Shanghai to—	First class	Second class	Shanghai to—	First class	Second class
	<i>U. S. currency</i>	<i>U. S. currency</i>		<i>U. S. currency</i>	<i>U. S. currency</i>
Aden.....	\$243. 00	\$180. 00	Nagasaki.....	\$22. 50	\$13. 50
Brindisi.....	324. 00	.....	New York.....	621. 00	.....
Bombay.....	207. 00	117. 00	Port Darwin.....	253. 00	.....
Brisbane.....	257. 00	166. 00	Portland.....	346. 00	.....
Cape Town.....	450. 00	.....	Port Said.....	465. 00	.....
Colombo.....	189. 00	.....	Penang.....	99. 00	.....
Durban.....	396. 00	.....	Saigon.....	77. 00	.....
Olbraltar.....	405. 00	.....	San Francisco.....	346. 00	176. 00
Hongkong.....	36. 00	.....	Seattle.....	316. 00	176. 00
Honolulu.....	243. 00	.....	Singapore.....	130. 00	.....
Kobe.....	49. 00	.....	Sydney.....	274. 00	.....
London.....	477. 00	.....	Tacoma.....	346. 00	176. 00
Malacca.....	99. 00	.....	Tangier.....	427. 00	.....
Manila.....	73. 00	.....	Vancouver.....	346. 00	176. 00
Marseille.....	441. 00	.....	Victoria.....	346. 00	176. 00
Melbourne.....	279. 00	.....	Vladivostok.....	51. 00	.....
Neji.....	27. 00	.....	Yokohama.....	45. 00	22. 50

OCEAN STEAMSHIP FREIGHT RATES: GENERAL CARGO

[Per ton of 40 cubic feet, or 2,000 pounds]

Shanghai to—	U. S. currency	Shanghai to—	U. S. currency
New York via Panama.....	\$16	Vancouver.....	\$15
New York via Suez.....	15	Portland.....	15
San Francisco.....	15	London.....	16
Seattle.....	15	Marseille.....	15
Los Angeles.....	15	Rotterdam.....	15

HARBOR CONTROL

The Shanghai Harbor consists of the channel of the Whangpoo from the arsenal downstream to Tungkow Creek. It has a length of 54,000 feet, with a 24-foot channel of an average width of 700 feet and an area between normal lines of about 1,000 acres.

The administration of the port of Shanghai is under the jurisdiction of the Chinese Maritime Customs, which maintains a river police force. A health service is maintained, with stations at Woosung and Shanghai, which enforces the sanitary regulations enacted by the port consular authorities. The harbor master, an officer of the Chinese Maritime Customs, is responsible for all mooring berths and berthings. Mooring berths are privately owned, but action has been initiated to make them public property. While it is not compulsory, pilotage is advisable where the master of an incoming ship is unacquainted with the harbor.

PORT ACCOMMODATIONS

HEAD-AND-STERN MOORINGS²

There are 19 head-and-stern mooring berths. Four of these are owned by the China Merchants' Steam Navigation Co. and one by the China Navigation Co., and these five berths are used exclusively by the coasting and river steamers belonging to these companies.

The remaining 14 berths are privately owned, but are available to outside shipowners by special arrangements with the owners. Nine of these berths have a length of 600 feet and the remainder (five) a length of 700 feet, with depths from 24 to 32 feet at low-water springs.

Provision has been made for the eventual public ownership of moorings.

SWINGING BERTHS

There are some 30 swinging berths for vessels from 150 to 450 feet in length, with depths for the larger vessels from 22 to 25 feet.

During freshets and extraordinary spring tides, when the current is considerably above average strength, vessels moored in the stream sometimes drag their anchors, especially if these are of the patent type which do not hold well in the somewhat loose mud bottom.

DOCKAGE

The river frontage, both on the Shanghai and the Pootung sides, is shown in the table below. It shows the opportunity still left for development of the foreshores within the existing harbor limits and the amount of bunding unserved by either pontoons or wharves. There is no unoccupied land available on either side of the river within harbor limits. Pontoons and pile wharves are about equal in number, the latter being more common on the Pootung side of the river because of the direction of the current.

² Information supplied by the harbor master, Chinese Maritime Customs, Shanghai.



FIG. 18.—Robert Dollar Building, Shanghai, in which are located offices of American commercial attaché

Classes	Shanghai	Pootung	Total
	<i>Feet</i>	<i>Feet</i>	<i>Feet</i>
Frontage served by pontoons.....	9, 270	6, 500	15, 770
Pile wharves.....	4, 810	11, 805	16, 615
Bunding without pontoons or wharves.....	24, 510	22, 633	47, 143
Natural bank.....	13, 720	13, 305	27, 025
Creeks.....	800	940	1, 740
Total.....	53, 110	55, 183	108, 293

PUBLIC FRONTAGE

On the frontage of the international settlement above the Soochow Creek there is a public bund 3,500 feet long, of which 500 feet is used for a public garden and 3,000 feet for a quay and promenade and for discharging lighters. Along this quay are 16 pontoons, 2 of which belong to the Customs, 2 are used exclusively for landing passengers from steamers lying at Woosung, and the remainder are for general cargo. This bund and the pontoons are supported by wharfage dues.

Along the French river front there are 2,000 feet of public quay, with but five public pontoons and two jetties.

There is but one public pontoon and only a few boat jetties on the Pootung side of the river. Only one jetty has proper steps.

HARBOR COMMUNICATIONS

Both sides of the river are served by the Shanghai Municipal Telephone Co., though beyond the limits of the Settlements this service is expensive and subject to special arrangements. The company is prepared to connect instruments to ships lying in dock. Because of the lack of good roads along the water front the various companies owning property on both sides of the river maintain steam tenders which make hourly trips from the Customs Jetty to the various installations. There is no charge for this service. There has recently been established a motor-boat service designed to oust eventually the greater part of a numerous fleet of sampans which at present handle much of the passenger traffic to and from ships. There are several public ferries on the river. Because of the numbers of sampans available for a small fee it is never necessary to put ships' boats over the side for the purpose of painting or other ship's work.

BONDED WAREHOUSES

There are no publicly owned bonded warehouses in Shanghai. Most of the privately owned bonded warehouses are available to shippers. Owners of "godowns" which they desire registered as bonded warehouses are required to execute a bond with the Commissioner of Customs guaranteeing the observance of certain simple regulations which may be amended by him from time to time. The bond provides for an indemnity of 500 haikwan taels for infraction of regulations, as a temporary fine pending adjudication by consular or other authorities. Repacking of import cargo in bonded warehouses is prohibited under penalty of again paying duty, except

in case of damaged cargo. Export cargo may be repacked under customs supervision. All goods in such godowns are under the supervision of customs officers appointed to that duty.

[Lists of the bonded warehouses in Shanghai are on file in the Bureau of Foreign and Domestic Commerce, and may be obtained upon application.]

WHARFAGE AND STORAGE CHARGES

The various companies owning and operating wharves and "godowns" in Shanghai publish tariffs which are on about the same scale of prices, as follows:

Vessels carrying Chinese and/or Japanese cargo, 0.42 tael per foot (\$0.35, United States currency).

Vessels under 300 feet, carrying coal only, 90 taels (\$74, United States currency).

Vessels over 300 feet, carrying coal only, 0.42 tael per foot (\$0.35).

Oversea steamers other than the above, 0.90 tael per foot (\$0.74).

Lorchas (semiforeign native vessels), 60 taels (\$49).

Vessels from foreign ports remaining at the wharf for more than five days will incur a demurrage charge of 60 taels (\$49, United States) for the first day and 90 taels (\$74, United States) for the second and every succeeding day or part thereof.

Coasting vessels remaining at the wharf for more than three days will incur an extra charge of 36 taels (\$29.63, United States) for the first day and 60 taels (\$49) for the second and every succeeding day or part thereof.

Cargo landed from ships on pontoons or wharves is stored there at tariff rates and delivered to consignees free of rent charge if removed within 10 days of berthing, the berthing day being counted as one. The cost is about 0.60 tael (\$0.66, United States) per ton for the entire service. Cargo is delivered during customs working hours free of extra charge when delivery is effected from the section where landed. These rates, while generally adhered to, are cut in certain instances in favor of valued customers, but not in favor of any certain nationality nor to an extent which has caused unfavorable comment.

The wharf and godown companies store cargo at a rate of 1.40 taels (\$1.15, United States) per ton for the first month and for each succeeding month they charge 1.20 taels (\$0.99, United States) per ton. There are certain godowns adjacent to the harbor where storage may be had at about two-thirds of the above charges, because they have not the taxes and other charges which have to be met by the big wharf companies. The charges published in the tariff are reduced 15 per cent in all cases on the Pootung side.

RAILWAY CONNECTIONS

There are but two railway connections, both outside the harbor limits, one at Woosung with the Shanghai-Nanking Railway, where a dock capable of accommodating two ships is maintained, and another wharf at Lunghua, above the upper limits of the harbor, where the Shanghai-Hangchow-Ningpo Railway has accommodations for one ship. In addition the Shanghai-Nanking Railway has a freight station at Jessfield, on the Soochow Creek, where it is

prepared to handle a great volume of lighter-borne cargo. Because of the poor location of both railway docks and the lack of a belt-line railway about the harbor, of car ferries, and of the other appurtenances of an efficiently operated port, practically all cargo destined to or from the rail is lightered through the Jessfield terminal and the Soochow Creek.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

Electricity is supplied for lighting purposes by the Shanghai Municipal Council's electricity department at 0.13 tael per kilowatt-hour, with discounts up to 30 per cent on large consumption, and in the Chinese city by the Chapei plant at \$0.24 Mex. per kilowatt hour.

[A complete list of the electric-light plants in the Shanghai consular district, with details of their equipment, is on file in the Bureau of Foreign and Domestic Commerce and may be obtained upon application.]

WATERWORKS

The Shanghai city group, or, as it might better be called, "Greater Shanghai," is served by four waterworks—the international settlement by the Shanghai Waterworks Co. (Ltd.), the French concession by the Compagnie Française de Tramways et d'Éclairage Électriques de Shanghai, and the native city and Chapei district by Chinese companies. Outside of Shanghai, Ningpo is the only city in the district with a water system.

CONSERVANCY AND RECLAMATION WORKS

The Whangpoo Conservancy Board, which is charged with the upkeep and improvement of the Whangpoo River, a part of which forms Shanghai Harbor, is the only conservancy organization of any importance in this consular district. It is an organ of the Chinese Government, formed according to an agreement with the powers, and its personnel is international. In addition to keeping clear the channel and the anchorages in the river, it is doing a considerable amount of reclamation work in the way of pumping mud into tidal basins, thereby creating excellent industrial and agricultural land.

Another Chinese Government body, the Yangtze River Commission, is charged with the improvement of that waterway. The inland waterways are under the nominal control of a body called the Kiangnan Conservancy Board, which has headquarters at Nanking.

TRAMWAYS

The Shanghai Electric Construction Co., a British concern capitalized at about 1,500,000 gold dollars, operates the Shanghai Tramways which serves the various parts of the international settlement. Perhaps the outstanding performance of this company has been the development of a railless tram car which, drawing its current from overhead trolley wires, is being used quite extensively, especially where narrow streets preclude laying rails. Fares over

the lines of the Shanghai Tramways are 3 cents per section of about 1 mile, third-class fares being one-half of this charge. First-class monthly tickets may be had for \$6 and entitle the holder to transportation over all lines and as often as desired during the period for which they are issued.

Tramways in the French concession and extending some distance out into Chinese territory in the neighborhood of the Kiangnan Arsenal are operated by the *Compagnie Française de Tramways et d'Éclairage Électriques de Shanghai*, the head office of which is in Paris. The capital of this firm is estimated at about the same figure as that of the company operating in the international settlement, and its fares are about the same.

BUS LINES

Within the limits of the French and international settlements the China General Omnibus Co., a British company, opened a bus service in September, 1924. Its services are intended to include eventually all sections of Shanghai, and it is anticipated that this means of rapid transit will afford relief to the overcrowded tramways.

MOTOR CARS AND TRUCKS

It is anticipated that the motor-car census made at the end of 1924 will show a total of about 4,800 motor vehicles in and about Shanghai. The majority of the cars in service are privately owned, although Shanghai is well provided with hire cars which may be obtained at an average rate of \$4, United States currency, per hour. Several firms do a general trucking business about the various sections of Shanghai, but truck transport is slow in establishing itself as a general practice because of the cheapness of coolie labor.

IMPORT AND EXPORT TRADE

The trade of Shanghai was handicapped by many difficulties during 1924, the most serious of which was the civil war and the requisition by the military authorities of transportation lines for military purposes. Export cargo was laid up through lack of adequate transportation facilities, and import cargo could not be shipped to the interior points for the same reason.

According to the annual report for 1924 of the American consulate general at Shanghai, total foreign imports into Shanghai for 1924 were valued at \$395,227,257 United States currency, as compared with \$348,152,505 in 1923, an increase of \$47,074,752. According to the same authority, total exports of local origin for 1924 were valued at \$311,263,660, as compared with \$299,675,443 in 1923, an increase of \$11,588,217. Thus, the total trade in 1924 increased over 1923 by \$58,662,969 United States currency.

The following table gives the quantity and value of the principal articles imported and exported at Shanghai during 1924:

Articles	Quantity	Value	Articles	Quantity	Value
IMPORTS			EXPORTS		
		<i>United States currency</i>			<i>United States currency</i>
Coal.....tons.....	777,595	\$6,670,041	Antimony, all kinds.....pounds.....	17,943,513	\$1,000,767
Cotton textiles.....pounds.....	135,662,842	77,039,772	Carpets, large.....number.....	92,083	2,438,047
Cotton, raw.....do.....	10,006,165	4,671,569	Cigarettes.....pounds.....	124,189,478	72,649,188
Cigarettes.....do.....		17,759,993	Cotton, raw.....pounds.....	271,770,707	29,748,520
Dyes, aniline.....do.....		5,553,338	Cotton yarn.....do.....		85,126,456
Electrical materials and fittings.....do.....		3,258,021	Egg albumen, dried.....pounds.....	6,736,582	4,896,271
Flour, wheat.....pounds.....	203,600,820	5,271,064	Eggs, fresh.....thousands.....	247,534	2,112,268
Gasoline (benzine).....do.....			Flour (wheat).....pounds.....	781,228,111	19,336,686
.....American gallons.....	4,016,994	1,881,625	Hides, cow.....do.....	15,666,482	2,952,637
Haberdashery.....do.....		1,398,731	Nankeens.....do.....	13,508,755	5,521,369
Indigo, various forms.....pounds.....	53,110,586	16,251,975	Oil, wood.....do.....	100,183,748	12,595,507
Kerosene, all kinds.....do.....			Peanuts (kernels).....do.....	148,866,374	5,766,837
.....American gallons.....	44,727,241	8,268,291	Rice.....do.....	584,898,538	12,328,887
Leather articles, all kinds.....do.....		2,844,714	Sheetings.....pieces.....	4,148,755	20,328,502
Machinery, all kinds.....do.....		8,052,630	Skins, goat, untanned.....pieces.....	3,895,853	2,610,410
Medicine, all kinds.....do.....		2,577,390	Seed, sesame.....pounds.....	85,973,701	3,611,745
Metals and minerals.....do.....		23,144,367	Silk piece goods.....do.....	2,143,464	14,275,544
Motor cars.....number.....	1,067	1,625,505	Silk pongees.....do.....	1,298,342	3,673,765
Paper, all kinds, pounds.....do.....	178,587,342	9,598,573	Silk, raw.....do.....		
Miscellaneous piece goods.....do.....		5,431,327	Waste.....do.....	10,681,329	3,502,110
Postal parcels, n. o. c.....do.....		5,512,107	White.....do.....	5,179,372	29,940,111
Rice and paddy, pounds.....do.....	4,137,499	113,701	Wild.....do.....	1,319,403	3,744,680
Sugar, all kinds.....do.....	488,553,831	22,763,704	Yellow.....do.....	2,497,375	9,298,269
Tobacco leaf.....do.....	80,031,587	18,053,582	Tea:.....do.....		
Wheat.....do.....	625,035,969	12,966,622	Black.....do.....	28,508,071	4,910,518
Wool and cotton unions.....do.....		5,731,780	Green.....do.....	34,439,121	6,651,076
Wool and woolen goods.....do.....		10,283,550	Tobacco.....do.....	31,021,976	3,144,055
Lumber.....do.....		8,442,537			

MONEY, BANKING, AND CREDIT*

BANKS

Shanghai is well equipped with banks to handle the import and export trade which is the life of the port. The majority of the financial institutions specializing in foreign exchange and trade are foreign banks, but of late years the Chinese bankers have come to realize the importance of this department of finance and are slowly coming into line with their foreign colleagues. From an investment point of view the community is singularly lacking in banking facilities. Commercial banking, as it is understood in the United States, is almost unknown to the foreign banking circles in China. They apparently deem it more profitable to utilize their available resources in exchange operations rather than in fostering commercial undertakings, as is the practice in America. In Chinese commercial circles the native banks, of which there are hundreds in this consular district, fulfill the functions of a commercial bank, but at exorbitant interest rates, which are caused by the extreme element of chance which they allow to enter into their operations. Security is accepted by them which would not be considered by American banks, and the speculative character of these institutions may be realized from the fact that their interest rates vary anywhere from 10 to 30 per cent per month.

Foreign banks undertake the financing of foreign business houses by the means of overdrafts, on which the interest rates are from 7 to 10 per cent per annum. Loans as they are known in the United

* See special chapter on "Currency, exchange, and banking."

States are unusual. It has been suggested many times that there is a legitimate field in China for a strong commercial banking house, but so far American investors have not taken up the idea.

The following list of banks includes the chief institutions in Shanghai which handle foreign exchange:

American Express Co. Inc.
 American-Oriental Banking Corporation.
 International Banking Corporation.
 Equitable Eastern Banking Corporation.
 International Banking Corporation.
 Bank of Taiwan.
 Banque Belge pour l'Étranger.
 Banque de l'Indo-Chine.
 Chartered Bank of India, Australia & China.
 Hongkong & Shanghai Banking Corporation.
 Mercantile Bank of India.
 Nederlandsche Handel-Maatschappij.
 Russo-Asiatic Bank.
 Sumitomo Bank.
 Yokohama Specie Bank.
 Bank of China.
 Commercial Bank of China.
 Nederlandsch Indische Handelsbank.
 Banque Franco-Chinoise.
 Bank of Chosen.
 Russo-Asiatic Bank.
 Deutsch-Asiatische Bank.
 Mitsubishi Bank.
 Mitsui Bank.
 P. & O. Banking Corporation.
 Shanghai Commercial and Savings Bank.

CURRENCY

TAEI

Commercial transactions are conducted in Shanghai taels and Mexican dollars. In practice Mexican dollars are on a parity with Yuan and provincial dollars. The Chinese Maritime Customs makes all of its collections in haikwan taels, which have a fixed relation to the currency of each port where there is a customhouse. The following list gives the silver content of the various taels in this consular district:

Shanghai tael, 545.25 grains.
 Ningpo tael, 523.6 grains.
 Wenchow tael, 561.7 grains.
 Soochow tael, in value 2 per cent less than Shanghai tael.
 Hangchow treasury tael, in value 1.86 per cent under Shanghai tael.
 Hangchow market tael, in value 0.28 per cent less than Shanghai tael.

DOLLAR

According to the National Currency Regulations the dollar is called the Yuan and contains 23.97795048 grams of pure silver. In this consular district there are in circulation the official Yuan dollar, the Mexican dollar, a great many of the old Spanish, or Carolus, dollars, and dollar coins minted in various places under provincial governments, the majority of which are accepted only at a discount. In Shanghai the Mexican dollar is preferred over all other coins, although the Yuan dollar is accepted without objection.

In southern Chekiang Province there are many old Spanish dollars still in circulation which are about equally in demand with the Mexican dollars, although not nearly so numerous.

In Ningpo there is an interesting unit of value, a fictitious currency known as the "transfer dollar." It is like the tael in that it has no coinage. It simply exists as a credit entry on the books of a native bank in favor of a customer, and its value depends upon the amount of silver coin in actual circulation. When silver is very plentiful the "transfer dollar" is cheap and when silver is scarce its value rises, the banks being willing to pay very considerable premiums for coin at such times. In Ningpo a great deal of the commercial business of the port is transacted in this fictitious currency. A money exchange is conducted in one of the tea shops daily, and a great deal of speculation is carried on because of the existence of this system, which no doubt owes its continuance to that element.

BANK NOTES

The foreign banks operating in China issue their own notes, which have a wide circulation and greatly facilitate the transaction of ordinary business which requires the use of currency. The larger Chinese banks also issue notes. The Chinese Ministry of Finance issues no treasury notes as we know the term in the United States.

BAR SILVER AND GOLD

Bank reserves are kept and large native transactions are done in silver ingots, which are known as "sycee shoes," and range in weight from $\frac{1}{2}$ to 100 taels, the weights being only approximations of round sums. Shanghai "shoes" weigh about 50 taels, the average fineness being 916.66. These shoes or ingots may be seen daily upon the streets of Shanghai after banking hours when the various banks, foreign as well as Chinese, are settling their balances, there being no central clearing house in the community. The bulk of the metal makes reasonably safe this open carrying of great amounts of treasure.

EXCHANGE BROKERS

One of the most interesting sights, amusing both to tourists and to old residents in Shanghai, is the fleet of tiny, pony-drawn brokers' carts which dash madly about the business section during banking hours. They are the conveyances used by the numerous exchange brokers, foreign and Chinese, who, while they serve the purpose of glorified errand boys in the place of a modern ticker system, make enviable incomes by acting as middlemen between the banks and the mercantile houses in foreign and domestic exchange transactions. Their convenience is their sole reason for existence, and it is reported that the banks have under consideration a less spectacular but more efficient means of disseminating information regarding their rates.

CREDITS

The foreign-exchange banks provide the machinery for the conduct of the financial side of the import and export trade. The majority of exporters of Chinese produce ship their goods against

credits which have been opened in Shanghai banks by their foreign connection. Some companies draw at 90 days on the foreign purchaser, but this method, other things being equal, causes a loss of several per cent, which in many cases represents the profit on a transaction, and the safe method is the first. Importers in China are in the position of opening cash credits in foreign centers or arranging with the banks to honor drafts against them for goods shipped from abroad.

It has never been the practice of foreign exporters to consign cargo to China except in instances where manufacturers maintain their own offices in the country.

In China's domestic trade—that is, the trade in both native and foreign goods within the boundaries of the country, after all customs formalities have been completed—credits play a very important part, more so perhaps than in the domestic trade of the United States.

POWERS OF ATTORNEY

It is hardly possible to lay too much emphasis on the importance of investing representatives of American firms who wish to do business in China with legally complete powers of attorney, suitable to meet every occasion. It should be remembered that the American representative in China may have occasion to do business with banks, commercial houses, and officials not only of China, but possibly of every trade nation represented there, and that his authority should be sufficiently broad and specific to enable him to meet the general requirements of each of them. Powers of attorney which do not answer the requirements of local banks, of the different nationalities, frequently cause embarrassment and the loss of valuable time to representatives of American firms. Where general power is intended, it is not sufficient that it be expressed in merely general terms. In addition to the conventional blanket expression of general power, at least the following specific powers should be expressed:

(1) Authority for the principal, with power of substitution, to sign consular invoices.

(2) To open and/or operate accounts in the name of the principal.

(3) To overdraw such account.

(4) To borrow money in the name of the principal.

(5) To pledge goods and/or securities.

(6) To draw, accept, and/or indorse bills of exchange and related documents.

(7) To make forward exchange settlements.

(8) To substitute authority.

Without going into the question, it may be said generally that powers of attorney issued by an American firm to an American representative or to a representative of foreign, non-Chinese nationality should differ somewhat in character from powers granted to Chinese representatives. While carefully drawn powers of attorney in accordance with the laws of the United States should be issued in the United States, many competent authorities in China, acquainted with local conditions, believe it advisable, where possible, to have such authority reinforced by powers of attorney prepared in China by some competent American or other lawyer.

ADVERTISING METHODS AND FACILITIES *

In the Shanghai consular district advertising is fast assuming the importance which it has in merchandising in the United States. Newspaper advertising is proving itself to be increasingly valuable, and there are billboards both in and out of the cities. Advertising agencies, both Chinese and foreign, have been organized to work along American lines. Certain of the larger corporations maintain their own advertising departments, which have been eminently successful. In short, advertising has been found to be as efficacious in China as it has elsewhere.

The more important advertising mediums in the district are:

Newspapers: *Sin Wan Pao* (Chinese), circulation 125,000; *China Press* (American), circulation 4,500; *Shanghai Times* (British), circulation 3,000; *Evening News* (nationality uncertain), circulation 4,000; *North China Daily News* (British), circulation 4,000.

Weekly: *Weekly Review of the Far East* (American); *North China Herald* (British).

Monthly: *Far Eastern Review*; *Asiatic Motor*.

Of the foregoing publications, the *Sin Wan Pao* has the greatest advertising value with respect to the Chinese markets. There are numerous other Chinese dailies, but they are of minor importance when compared with the paper mentioned. The foreign papers reach only the foreign population and the small section of the Chinese who are able to read English. However, it would be unfair to disparage their advertising value, as instances continually come to light where foreign-language advertising has secured Chinese business.

Advertising in the Chinese language is a matter which should be approached with the greatest caution. The difficulties of translation make it imperative that such work be done only by highly trained specialists. Occasions have arisen where poorly written advertisements have caused embarrassment and actual loss to foreign firms which might have been avoided by the employment of competent copy writers.

TRAVEL FACILITIES

Shanghai, as the great entrepôt of China, has perhaps better means of reaching all parts of the country than any other port. It is connected by several lines of comfortable steamers (one or more of which sails almost nightly) with the interior cities that lie along the Yangtze River. It is connected with Peking and the north by the Shanghai-Nanking Railway, which connects at the latter city with the Tientsin-Pukow Railway; it also is connected with Peking by steamer to Hankow and the Peking-Hankow Railway at that point. Steamship lines with regular and frequent sailings also connect Shanghai with Dairen, Tientsin, Chefoo, and Tsingtao, on the north, and with Hongkong and all parts of Europe and the Far East.

Within the district Shanghai's hotels are among the best in the east and afford ample accommodations. In Soochow and Hangchow are hotels conducted by Chinese along foreign lines; but in Ningpo

* See special chapter on this subject.

and Wenchow travelers depend upon purely Chinese hostelrys or the hospitality of foreign residents. Experienced travelers usually take with them a capable Chinese "cook boy" on journeys into the interior.

TRADE ORGANIZATIONS

The nationals of all the more important countries interested in Shanghai trade are organized into chambers of commerce, a list of which appears below.

- American Chamber of Commerce of China.
- British Chamber of Commerce.
- Chinese Chamber of Commerce.
- General Chamber of Commerce.
- Japanese Chamber of Commerce.
- French Chamber of Commerce.
- Russian Chamber of Commerce.
- Norwegian Chamber of Commerce.
- Belgian Chamber of Commerce.
- German Chamber of Commerce.
- Italian Chamber of Commerce.
- Netherlands Chamber of Commerce.

American firms and also individuals should take advantage of the facilities offered by the American Chamber of Commerce, the entrance fee to which is 50 taels, with annual dues of 150 taels for firms, while for individual membership the annual fee is \$10 United States currency.

The Shanghai General Chamber of Commerce is international in character, all foreigners resident in Shanghai for business purposes being eligible for membership. It is important in that it expresses the collective will of the commercial community as no other organization is able to do, and has become a power in this part of the world.

American firms should be registered with the American consulate general in order to secure the advantages of consular protection and intervention—a matter which is of great importance in transacting business in China. No fee is charged for registration, which is available to all bona fide American houses and individuals.

LIVING COSTS

Observation and experience have led to the belief that for foreign residents the average cost of living in Shanghai is about the same as for similar living conditions in the cities in the United States, while in the country it is possible to live well for considerably less. Living conditions are changing in China just as business methods are undergoing a gradual revision. The old days of a free and easy Orient are gone. Business is conducted upon lines closely approaching American methods. Competition is keen and is reflected in the attitude of the foreign community toward life.

The cost of food is now (1924) at the highest mark on record. The shortage of foreign accommodations has forced rents to a high point. Board and room may be obtained for from \$120 to \$250 per month. Detached houses rent at prices ranging from 110 taels to 200 taels per month (\$77.90 to \$141.64 United States currency). Apartment houses are coming into favor, in which two to six room

apartments may be rented for from 85 to 150 taels per month, including heat and light. Separate board at hotels and restaurants costs from \$45 to \$75 per month.

The price of clothing, despite the many tales of the cheapness of Chinese tailors, is believed to be about equal to that prevailing in America. Servants, popularly supposed to be very inexpensive, are cheaper than domestic help in America, but wages are steadily increasing, and this, together with the necessity of maintaining several to do the work of one American servant, makes this item one of importance to the householder.

RECREATION

Sport has always played an important part in far eastern life, and excellent facilities for the enjoyment of all kinds of outdoor exercise are found in Shanghai. The premier sport is racing, after which come tennis, golf, polo, paper hunting, rowing, baseball, cricket, lawn bowls, rifle and trap shooting, and pistol shooting. Yachting is slowly growing in importance as the advantages of power boats become appreciated. House-boating is popular and fairly cheap. Hunting is still to be found within 100 miles of Shanghai and is not unduly expensive. Motoring is a minor pastime, because of the lack of roads, and can not be expected to assume its rightful proportions as a major sport until China has remodeled its transportation system.

Club life plays an important rôle in the social intercourse of the foreign community. In general it may be stated that clubs are plentiful and quite cheap, considering the excellence of the service provided. The more important clubs in Shanghai are the Shanghai Club, the Shanghai Race Club, the American Club, the Columbia Country Club (American), the Country Club (British), the French Club, and the Union Club (international).

The Navy Y. M. C. A. provides clubhouse accommodations for service men of all nationalities and also for a limited number of civilians. It is supported partly by its receipts, the annual deficit being made up by the American business community.

Cinema houses abound. A modern theater which is visited by several stock companies each year provides excellent amusement for playgoers. Cabarets and restaurants abound for the entertainment of people fond of good food and dancing.

AMERICAN COMMUNITY ORGANIZATIONS IN SHANGHAI⁵

It is of interest to note some of the typically American institutions which have been inaugurated by the American community in Shanghai as contributions to its substantial and permanent development. Foremost, perhaps, among these is the school for the education of the children of American parentage. This modern school, erected at a cost of over \$500,000, has a present enrollment of more than 400 students in all grades, from kindergarten through the high-school courses. It has also boarding facilities for a number of students from outports. There is an American country club occupy-

⁵ Contributed by Commercial Attaché Julian Arnold.

ing 6 acres of land devoted to sports; an American town club, in a modern seven-story building with living accommodations of 51 rooms with private baths, the whole property representing an outlay of \$500,000; and an American community church, built at a cost of more than \$200,000. In course of erection, opposite the race course and recreation grounds, is a Y. M. C. A., under American-British auspices. This building will provide 200 rooms for young men, with all the modern facilities characteristic of Y. M. C. A. organizations.

The Navy Y. M. C. A. at Shanghai, a splendid, modern six-story building, is primarily intended for use of the men from American ships, but is open to other nationalities as well.

The Women's Club of Shanghai has plans in preparation for rebuilding to house the activities of its organization, and plans have been drawn up for a \$2,000,000 United States Federal building at Shanghai to house the various American Government departments functioning there. At present the United States Government owns its consular buildings at Shanghai and the property occupied by the United States Court for China.

In connection with these evidences of the substantial nature of American communities in China, it may not be amiss to observe that in Peking the American community maintains a modern school, which cost \$75,000, for the education of children of American parentage, and that in Tientsin the Americans have purchased land and are raising money for the erection of an educational institution for their children there.

CHANGES IN TRADE CONDITIONS IN PAST DECADE

As has been previously shown by the statistical tables, there have been noticeable changes in the class of cargo brought into China during the past decade, the increase in machinery and the decrease in manufactured lines being especially notable; but the most striking change during that period is in organization of business.

Foreign business men have come to the realization of the extreme value of contact with the Chinese trade. The decade under review has seen this realization crystallized into direct representation by many manufacturers formerly engaged in the China trade through the medium of import houses. Manufacturers of cotton-milling machinery have opened their own China branches. Producers of food products and soaps have their Shanghai offices. Several of the largest automobile manufacturers are seriously considering establishing their own assembly plants in Shanghai to take care of the China market. The general import houses are falling into line by reducing their agency representations to a few lines in which they may be said to be experts and are benefiting thereby. The entire trend of the trade is toward specialization, and it is believed that its result will be of immense benefit to both the foreign manufacturer and the Chinese buyer. It reduces prices through eliminating commissions, and it places the trade in the hands of qualified experts, to the general improvement of its tone. The fact that this is the age of specialists and experts is being emphasized in this market.

LAND PROCEDURE IN SHANGHAI⁶

RIGHT OF LAND TENURE

The right of Americans and all other foreigners to acquire land in China is governed by treaty stipulations between China and foreign powers. Land so acquired is to be rented or leased in perpetuity and not to be held in fee simple. Missionary societies, as public bodies, are permitted to rent or lease, in perpetuity, land in any part of China, but the right of individual foreigners or foreign firms to so acquire land is limited to the treaty ports.

METHOD OF ACQUIRING LAND

The registration of land in the American consular land office may only be effected in the name or names of one or more duly registered citizens of the United States or of its possessions, or of a corporation chartered under the laws of any State, Territory, or insular possession of the United States or of the District of Columbia. Registration can not be effected in the name of a partnership as such, but should be in the name of its individual members. Land acquired by any missionary society should be registered in the name of the mission and not in the name of some member of the mission.

The most common form of title paper in China is the "hung chi," or "red deed," so called because of the red official seal stamped upon the face of the document, to which is attached the "white deed," or "bill of sale," when the land is transferred to another party.

In and about Shanghai the most common form of title paper is the "fangtan," or "square certificate," to which the bill of sale must be attached when the land is sold. These papers bear the seal of the district magistrate, contain the name of the owner, and state the location of the property and its area. All fangtans issued before the Taiping rebellion are held to be null and void. In view of the Chinese custom of dividing such fangtans when they desire to divide a plot of ground, and also because of the very thin paper upon which the fangtans are printed, these documents are often so damaged and mutilated that disputes regarding ownership and area easily arise. As it is almost impossible for a foreigner to distinguish between a false and a genuine fangtan, the matter is left entirely in the hands of the Chinese authorities. A small fee is charged by them for the verification of such documents, and such verification is felt to be practically the only safe way to distinguish between the genuine documents and the false.

Whenever those permitted to register land at the American consular land office have purchased land, completed the sale, and received the native documents covering the property, they should apply to the land office for the registration of the land so purchased. The necessary forms for such application will be furnished upon request. The fullest possible information as to the location, area, and boundaries should be stated in this application, and a plan, no matter how rough, should be sent in at the same time. A full and detailed description of all title papers should be given in the application and the status of the applicant should be clearly stated.

⁶ By Consul Howard Bucknell, jr.

Upon receiving the application for registration with the necessary documents the land officer, if everything is in order as far as he can determine, will assign a number by which the foreign title deed, if

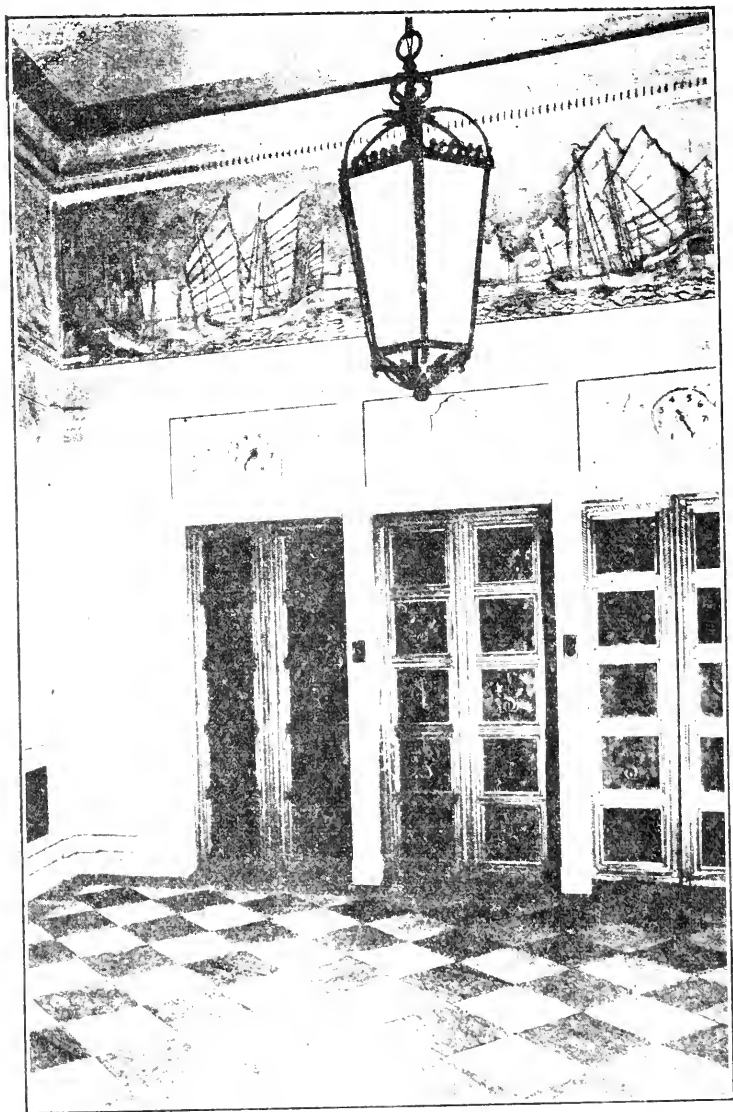


FIG. 19.—Entrance to Robert Dollar Building. Many American concerns occupy offices in this building

issued, will be designated, and will give an official receipt for the native documents received by him. Three copies of the foreign title

deed are then prepared, and with all documents of title are forwarded to the Chinese land office at Shanghai, with the request that the deeds be stamped and returned as soon as possible. Upon receipt of these documents by the Chinese land office that office will examine them to see if they are in order, and if they are found to be correct a date will be set for the measurement of the property concerned. The measurement of the property then takes place in the presence of representatives of the renter, the municipality, the Chinese land office, and the consulate general.

A plan of the property is then prepared, and is forwarded in two copies to the renter through the consular land office. If this plan is found to be correct the renter affixes his signature thereto and retains one, the other copy being forwarded to the consular land office. This copy is placed in the files of the consulate general, and the Chinese land office is notified that the renter has approved the plan and that the deed may now be stamped without further delay. If the plan be found to be incorrect, the consular land office returns it to the Chinese land office for correction, in some instances a remeasurement being held.

The deeds are then forwarded to the Commissioner of Foreign Affairs for stamping, and, when this has been done, the Chinese land office retains one copy of the deed for its files and forwards two copies to the consular land office, one for the renter of the property and one for the files of the consulate general.

TRANSFERS

The transfer of land after the title deed has been issued is a simple one. The transferer and the transferee call at the consular land office and sign a statement stamped upon the face of the document to the effect that the property covered by the deed is thereby transferred to the purchaser, and he in turn signs as accepting the transfer. If the nationality of the transferee is American, the deed is retained in the American registry. If of other nationality, the deed is canceled and turned over to the consulate concerned for registration in that consular land office.

LAND VALUES AND DEVELOPMENT IN SHANGHAI

There is quoted below an article appearing in the Chinese Economic Monthly magazine, which shows in detail the relative land values as well as the growth of construction and land improvements in Shanghai.

Development of land in Shanghai and the consequent advance in values have gone ahead rapidly since the first international concession was granted in 1843; and Shanghai to-day presents more the appearance of a western than an oriental city. While construction of a foreign city on the banks of the Whangpoo has been in progress for 80 years, this development has been especially rapid in the last decade, and values of property both in the concessions and in the Chinese sections belonging to or near the city have risen abnormally.

Acquisitions by the public works department of the Shanghai Municipal Council scarcely represent a true index of the rising land values. However, the figures given below show the area and cost of land required for road widening and extension from 1918 to 1923.

	1918	1919	1920	1921	1922	1923
Area in mow.....	17,187	75,578	28,941	87,653	179,590	130,857
Cost in taels.....	168,945	188,830	142,478	157,189	804,616	905,393

The most valuable property in Shanghai and in all China, so far as real estate goes, is on the Bund, a thoroughfare of imposing office and bank buildings facing the Whangpoo River. Nanking Road, running westward from the Bund and containing the most prominent shops in the city, is another street where property values are high. Land in the western districts of the international settlement and French concession is considerably lower in price, and in the eastern district, where there are a number of factories and "godowns," prices are lower still.

The average assessed value of land on the Bund per mow (one-sixth of an acre) is 138,000 taels; other properties in the central district of the international settlement range from 23,000 to 114,000 taels per mow. These are assessed values, not actual market values, which are perhaps from 33 to 75 per cent higher. In the northern district of the international settlement assessed values range from 10,900 to 34,000 taels per mow, and in the remaining districts land is, on the whole, somewhat cheaper. In the French concession, along the Bund and river front, the average assessed value is 60,000 taels per mow; but in the remaining area of the French concession assessed land values range from 3,000 to 7,000 taels.

Agricultural land without creek or road frontage and more than a mile from any municipal road of the foreign settlements or Chinese city is obtainable at about 180 taels per mow.

Land within the foreign settlements, if below the level of the municipal road, must be raised before being built upon. The average cost of filling 1 foot high with country mud is about 150 taels per mow, but the price varies considerably according to the distance that the mud filling has to be carried.

Five or six years ago a mow of land (one-sixth of an acre) in a certain section of the Chapei district, a Chinese section, sold for 500 Shanghai taels. Now this piece is valued at 5,000 taels per mow. Some of the most undesirable pieces of property in Chapei are valued at 2,000 taels.

The following figures represent building activity in the international settlement during the last 5 years.

Class	1919	1920	1921	1922	1923
Chinese.....	2,336	2,470	4,064	4,267	5,634
Foreign business buildings.....	50	27	66	48	208
Foreign residences.....	51	83	235	128	162
Godowns.....	52	84	55	28	38
Stables and garages.....	52	44	61	73	59
Work sheds.....	94	101	113	108	76
Mills and factories.....	28	51	41	25	14
Miscellaneous.....	468	683	709	773	1,081
Total.....	3,131	3,543	5,344	5,450	7,272

The value of the houses in the settlement in 1923 was estimated at 13,030,400 taels. The estimate for 1922 was 15,926,600 taels; for 1921, 21,058,700 taels; for 1920, 10,872,300 taels; and for 1919, 5,852,600 taels.

Construction costs in Shanghai, as in other parts of the world, have increased markedly in the last few years. For instance, in 1912 an ordinary type of Chinese two-story house, called a hong, having one big room, a small courtyard, and a kitchen, could be erected for 500 taels. By 1920 the cost of construction, using the same quality of materials as in 1912, was 800 taels; in 1921, 900 taels; in 1922, 1,000 taels; and in 1923, 1,200 taels, which figures will also cover expenses of building for 1924. These figures indicate the upward trend of construction costs. The usual reasons adduced to account for this are increased cost of materials and labor and a larger net profit on the part of builders.

The cost of constructing foreign houses, estimated at so much per 100 square feet, has increased in the proportion indicated below. To build an ordinary foreign residence of two stories and an attic, with oak fittings and fairly good appointments, the present building cost is around 750 taels per 100 square feet.

The following shows the approximate cost from 1912 to 1924: 1912, 350 taels; 1920, 500 taels; 1921, 550 taels; 1922, 650 taels; 1923, 700 taels; 1924, 750 taels.

Labor costs have increased in Shanghai as elsewhere, as the following table of daily wages paid by contractors in the city indicates (workmen getting these wages also receive food from their employers):

	1912	1920	1921	1922	1923	1924
	<i>Cash</i>	<i>Cash</i>	<i>Cents</i> ¹	<i>Cents</i> ¹	<i>Cents</i> ¹	<i>Cents</i> ¹
Carpenters.....	200	400	30	40	40	40
Masons.....	160	360	26	26	26	26

¹ Cents are in big money, 100 cents equaling a dollar.

TIENTSIN CONSULAR DISTRICT

By Consul General C. E. Gauss

LOCATION AND AREA

Tientsin consular district lies between latitudes 34° and 40° N., corresponding to the region between Philadelphia, Pa., and Raleigh, N. C. Its area of 140,000 square miles comprises those portions of Chihli and Shansi Provinces south of the Great Wall and the section of Honan Province north of the Yellow River. The climate is distinguished by excessive dryness. Severe dust storms occur in early spring and late autumn. The average rainfall is 20 inches, mostly in July and August, the rainy season. Average maximum temperature, 100° F.; average minimum temperature, 0 F.

POPULATION

The Chinese postal service's estimate of the population of the district in 1922 was 45,000,000. The density for the whole consular district is estimated at 320 per square mile; for Chihli, 295; for Shansi, 134; for Honan, 454 per square mile.

CITIES

Tientsin, in Chihli Province, is on the Hai Ho, 42 miles from the sea. It was opened to foreign trade by the treaty of 1860. The estimated population is 838,629. The number of European residents, exclusive of military garrisons, is 5,400; the number of American residents, excluding military, 729, and the number of American business firms, 75.

Tientsin is the principal trade port and distributing center of North China, the territory commercially tributary to it including the consular district, portions of Shantung, Honan, Inner Mongolia, certain portions of southern Manchuria, Kansu, and Chinese Turkestan.

Originally icebound during the winter months, recent improvements of the Hai River make Tientsin now practically an ice-free port, and large coasting steamers are able to proceed up the river to the city dock. Ocean steamers anchor outside the bar at Taku and are served by lighters.

There are five foreign concession areas at Tientsin, administered by Belgium, France, Great Britain, Italy, and Japan. The Austrian and German concessions were taken over by China in 1917, and the relinquishment of their title was confirmed by subsequent treaties. The Russian concession, temporarily taken over by China for administration in 1920, was, by agreement between China and the Russian Soviet régime in 1924, definitely restored to China. The former Austrian, German, and Russian concessions, now restored to China, have been organized as special Chinese administrative areas

and are administered under the Chinese commissioner of police separately from the administration of the Chinese city. In the British, French, Italian, and Japanese concessions, administration is in the hands principally of municipal councils elected by the taxpayers.

There are no restrictions on the right of foreigners to reside in any of the concessions, except the requirement to abide by the municipal regulations and by-laws.

Peking is the capital of China, 87 miles by rail from Tientsin. Its estimated population is 1,181,400. The number of American residents, exclusive of legation guards, is 822. Peking has never been opened to foreign trade, but a number of foreign firms maintain resident representatives there.

Peking is of importance and interest as the seat of the National Government, and holds special interest for foreign travelers. Its four sections are known as the Tartar City, the Imperial City, the



FIG. 20.—Portion of campus of Tsing Hua College, Peking. This institution prepares about 100 students for entrance into American colleges each year from Boxer indemnity funds

Forbidden City, and the Chinese City. A section known as the Legation Quarter was established under the Boxer protocol of 1901, and is administered by a commission appointed by the diplomatic corps.

Foreign residents generally, including government representatives, missionaries, and the representatives of the business firms, reside in the Legation Quarter, so far as its restricted area will permit.

Chinwangtao, in Chihli Province, 165 miles from Tientsin by rail, is the winter port for Tientsin and Peking. Opened to foreign trade by imperial decree of 1898, its estimated population is 5,000. Since the improvements made by the Hai Ho Conservancy are rapidly making Tientsin an all-year port, the importance of Chinwangtao is diminishing. It is, however, the premier port east of Suez for the shipment of coal, and its harbor and wharfage facilities have been largely developed.

Taiyuanfu, the capital of Shansi Province, has an estimated population of 220,000.

AGRICULTURE

Fully 80 per cent of the population engage in agricultural pursuits. Farming methods and implements are primitive, and 65 per cent of the land holdings are in tracts of from one-half to 4 acres. The principal crops are millet, maize, kaoliang, wheat, cotton, beans, linseed, rapeseed, groundnuts, and walnuts.

North China is essentially a wheat-consuming section, while rice is the principal item of food of South China. The land in the district yields 23 bushels of wheat per acre, but conservative estimates place the average yield at 11 bushels. The flour-milling industry of North China draws a large part of its supply of wheat from this district, but in short-crop years large quantities of foreign flour are imported.

Kaoliang, maize, and millet are sown in the late spring, usually following the wheat harvest, and are harvested in the autumn. No estimates are available on yield or production, though all three are important food products and grown extensively.

Cotton cultivation has received considerable impetus in recent years owing to the development of the spinning industry in North China and the demand for raw cotton in Japan. As the profit from cotton growing is nearly double that realized from kaoliang or wheat, cotton cultivation has substantially increased and experimental stations have been established. Estimates place the area under cotton at 4,000,000 mow (666,666 acres) and production at 2,500,000 piculs (833,333 American bales).

Walnuts, groundnuts, beans, linseed, and rapeseed enter into the export trade.

MINERALS AND MINING

Coal is the only mineral worked on an extensive scale. Iron deposits exist: one company has been organized to work them, but has not begun operations. Concessions have been obtained for gold, silver, copper, lead, asbestos, and other mineral-bearing properties, but have not been developed. The estimates below, by the Geological Survey of China, 1921, represent the most reliable statistics available on the coal reserve.

Chihli Province, including the metropolitan district: Anthracite, 762,000,000 tons; bituminous, 1,608,000,000 tons.

Shansi: Anthracite, 2,370,000,000 tons; bituminous, 3,469,000,000 tons.

Honan: Anthracite, 1,385,000,000 tons; bituminous, 360,000,000 tons.

The following table of production in 1922 gives the most reliable data available on output:

Provinces and mines	Quality of coal	Production, 1922
Chihli:		<i>Tons</i>
Kailan Mining Administration	Bituminous	3,710,274
Licheng Mining Administration	do	187,996
Chinghsin Mining Administration	do	482,701
Chengfeng Co.	do	35,000
Liukiang Co.	Anthracite	159,320
Chimingshan Mine	Semibituminous	18,689

1 Controlled entirely or partially by foreign capital.

2 Estimated.

Provinces and mines	Quality of coal	Production, 1922
Chihli—Continued.		<i>Tons</i>
Mentowkow small mines ¹	Anthracite.....	² 150,000
Toli Chowkowitz small mine ¹	do.....	576,174
Yenli Co.....	Bituminous.....	37,235
Chungbo Co.....	do.....	51,909
Honan:		
Peking Syndicate ¹	Anthracite.....	² 650,000
Chungyuan Co.....	do.....	² 400,000
Lihokou Co.....	Bituminous.....	² 260,000
Shansi:		
Paochin Co.....	Anthracite.....	223,386
Tatung Mines ²	Bituminous.....	² 150,000
Total anthracite.....		2,158,880
Total bituminous.....		4,933,804
Combined total.....		7,092,684

¹ Controlled entirely or partially by foreign capital.² Estimated.³ Railway transport.

The statistics given below, from a special report of the Geological Survey of China, June, 1921, represent the resources of such known deposits of iron ore in Chihli Province as have already been studied, and can not be taken to be the total existing reserve.

District	Ore	Iron contained	District	Ore	Iron contained
	<i>Tons</i>	<i>Tons</i>		<i>Tons</i>	<i>Tons</i>
Langkuan.....	49,200,000	26,600,000	Linyu.....	350,000	170,000
Hauanhua.....	20,600,000	9,600,000	Chaoyang.....	300,000	150,000
Huailai.....	4,000,000	2,400,000	Yih sien and other districts.	1,500,000	675,000
Chinghsing.....	5,000,000	2,500,000			
Lanhsien.....	11,129,000	3,339,000	Total.....	91,479,000	45,434,000

The Lungyen Mining Administration, mentioned later in this report, is the only company organized with modern equipment to exploit the iron resources of the district.

The following notes, extracted principally from Rea's Far Eastern Manual, pertain to the principal mining companies operating in the consular district.

COAL MINES

CHIH LI PROVINCE

Kailan Mining Administration (British-Chinese).

Head office.—Meadows Road, Tientsin.

Organization.—The mines of the Chinese Engineering & Mining Co., a British company registered in London, and the Lanchow Mining Co., a Chinese company, have under an agreement made in 1912 been placed under the operation and control of the Kailan Mining Administration. The aggregate capital paid up of the two companies amounts to some £2,000,000, with an additional £1,200,000 raised on first-mortgage debentures.

Location.—The mines are located in the Kaiping district of Chihli Province and are served by the Peking-Mukden Railway to Tientsin (81 miles) to Tangku (the river port near Tientsin) and to the deep-water port of Chinwangtao.

Output.—The coal is bituminous and coking. The output in 1923 reached 4,495,962 tons. In 1913 the output was approximately 1,700,000 tons.

Equipment.—The equipment throughout the mines generally is of the most modern type and will compare favorably with the largest and best-equipped collieries of the United States and Europe.

The management of this administration is in British and Chinese hands; the engineering control is largely in the hands of engineers of Belgian nationality.

Lincheng Colliery (Chinese).

Head office.—12 Hsiao-Tsao-chang, Peking.

Organization.—Established in 1897 and registered in February, 1905. The capital is stated as \$2,000,000 Yuan.

Location.—The mines are at Lincheng, 11 miles from Yakoing Station on the Peking-Hankow Railway, in Chihli Province.

Output.—Bituminous; output in 1922, 187,996 tons; in 1921, 279,851 tons.

Ching Hsing Coal Mines.

Head office.—1 Hankow Road, Tientsin.

Organization.—Mines opened in 1899 by a German company registered in 1908 as a Sino-German enterprise. Reorganized in 1922 under Sino-German cooperation. Capital stated as \$1,000,000 Yuan.

Location.—Chinghsinghsien (Tsingsing), Chihli Province. A light railway connects the mines with the Cheng-Tai Railway, which runs from Chentow (on the Peking-Hankow line) to Taiyuanfu, capital of Shansi.

Output.—Bituminous; output in 1922, 482,701 tons; in 1921, 577,991 tons.

Liuchang Coal Mining Co. (Chinese).

Head office.—154 Sinza Road, Shanghai.

Organization.—Registered 1918. Capital, \$1,000,000 Yuan.

Location.—Liu Kang coal field, Linyuhsien, Chihli Province, 13 miles north of the seaport of Chinwangtao. A light railway connects the mines with Chinwangtao.

Output.—Anthracite; 1922 output, 159,320 tons.

Mentowkow Coal Mines (Sino-British).

Head office.—Peking, West City.

Organization.—Organized in 1913 as a Sino-Belgian company, with capital of 100,000 taels and in 1915 converted into a Sino-British company.

Location.—Mentowkow, in the Western Hills (Hsishan) coal field, 16 miles west of Peking, reached by the Peking-Mentowkow branch railway.

Output.—Anthracite; 1922, about 150,000 tons.

Chimingshan Colliery (Chinese Government).

Head office.—Peking-Suiyuan Railway Administration, Peking.

Organization.—Capital, \$775,934 Yuan, of which \$351,102 was paid by the Ministry of Communications and the balance by the Peking Suiyuan Railway. Under the administration of the Peking-Suiyuan Railway.

Location.—Near Siahwayuan Station, on the Peking-Suiyuan Railway, 137 miles from Peking.

Output.—Noncoking bituminous: 1922, 18,689 tons.

Antzu Mines (Chinese).

Tung Yih and Tafeng companies.

Location.—Near Fangshan, in the southern part of the Western Hills (Ishshan district), near Peking.

Output.—About 250,000 tons of anthracite. Track for light railway has been built by the Tafeng Co. from Chowkoutien Station (the terminus of a branch of the Peking-Hankow line from Linliho) and is extended to the mining area held by the company at Antzu. An aerial tramway from Toli is monopolized by the two companies named.

HONAN PROVINCE

Fu Chung Corporation (British-Chinese Syndicate).

Head office.—England, 110 Cannon Street, London; China, Chiaotso, Honan Province.

Organization.—Capital, \$1,000,000 Yuan, subscribed in equal shares by the Peking Syndicate (British) and Chung Yuan Co. (Chinese), the latter being a group of native companies in amalgamation. This corporation was organized on June 1, 1915, to handle the products of the Peking Syndicate and the Chung Yuan Co. (Ltd.), whose anthracite coal mines are situated in Honan, north of the Yellow River.

Location.—The principal mine is the Jamieson colliery in Huaiching prefecture, Honan Province, on the Tso-Ching Railway. The Chung Yuan Mines are in the same neighborhood.

Output.—Anthracite: 1922, about 1,050,000 tons.

Liu-Ho Kou Mining Co. (Ltd.) (Chinese).

Head office.—Regine's Building, Peking.

Organization.—Capital, \$1,000,000 Yuan. Established 1903 and reorganized and registered in 1907.

Location.—Anyang district, Honan Province, near Fenglochen on the Peking-Hankow Railway.

Output.—Bituminous: 1922, 260,000 tons.

SHANSI PROVINCE

Pao Chin Coal Mining Co. (Ltd.) (Chinese).

Head office.—Yangchuan Station, Pingting, Shansi Province.

Organization.—Established, 1906; registered, 1919. Capital, 2,000,000 taels. This company was formed by the Shansi gentry to take over the concession which was repurchased from the Peking Syndicate in 1908.

Location.—The company operates mines at Yangchuan, which is midway between Chentow (Shihkiachwang) and Taiyuanfu on the Chengtien-Taiyuan Railway.

Output.—Anthracite: 1922, 223,383 tons.

Tung Pai Mining Co. (Ltd.) (Chinese).

Head office.—Tatung, Shansi.

Organization.—Established 1921. Capital, \$3,000,000 Yuan, subscribed by Shansi merchants in cooperation with Cantonese merchants.

Location.—Paichiauan, Kowchuanchen, Shansi Province.

Output.—Bituminous.

The output of mines in the Tatung section in 1922 was estimated at 150,000 tons.

IRON

Lungyen Mining Administration (Chinese).

Head office.—Huang Shou Yi Hutung, Peking.

Capital.—\$5,000,000 Yuan.

Location.—Mining rights of the Lung-Kuan iron mines over the area between Hsuanhua and Lungmen. Iron-ore deposits were also discovered in the vicinity of Hsuanhua, and subsequently the two mines were amalgamated into the Lungyen Administration. The principal mines are located at Sanchiatien, some 10 miles west of Peking. An extensive blast-furnace plant of American material was erected and the plant was ready to begin active operations on a large scale, but financial difficulties have shut down the entire works.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

COTTON SPINNING

In the consular district there are approximately 327,552 spindles, representing a capital investment of some \$22,600,000 Chinese currency. In 1922 the estimated number of employees in mills operating was 9,457, and the estimated output was 71,211 bales of yarn, which enters almost entirely into domestic consumption.

FLOUR MILLS

The capacity of the modern flour mills of the district is estimated at 47,000 bags. The estimated capital investment is over \$5,000,000 Chinese currency. No statistics on output or number of employees are available. The output enters into domestic consumption.

CEMENT WORKS

The one large cement works in the district represents a capital investment of some \$7,000,000 Chinese currency; the capacity and output are stated at 1,500,000 casks of 375 pounds net. The output enters into domestic consumption.

CARPET INDUSTRY

The carpet industry is carried on in some 700 to 800 small Chinese factories around Tientsin and Peking, a factory operating from 3 to 20 looms. It is estimated that 16,000 to 18,000 men are employed in the industry. The output can be estimated only on the basis of the export, about 90 per cent of the output being exported. The export in 1923 reached 4,439,000 square feet.

MATCH FACTORIES

The estimated output of the four largest match factories in the district is placed at 6,000,000 gross per year. The invested capital in the industry in this district is placed at something over \$3,500,000 Chinese currency.

GLASS FACTORIES

The principal glass factory, at Chinwangtao, has a capacity of 150,000 boxes of 100 square feet of window glass per annum. In addition, there are several smaller factories. The capital investment in the industry is estimated at over \$2,500,000 Chinese currency.

OTHER INDUSTRIES

The cotton-cloth industry of the district is extensive, being represented by numerous small establishments operating from 1 or 2 up to 50 or 60 small looms, weaving plain gray varieties of cotton cloth, nankeens, shirtings, drills, cotton canvas, etc. Many of these factories also dye their own cloths. This industry has thrived particularly in the section of Kaoyang and Joayang, near Paotingfu, in Chihli Province. In these two places and numerous villages within 20 miles radius, there are stated to be 15,000 weaving looms in operation, each household possessing from one to five looms. The yarn used for weaving is usually of the finer qualities, principally foreign, and the annual consumption is estimated at 60,000 bales. The product of the looms in this section is estimated at 2,000,000 pieces. These fabrics are of excellent quality, compare favorably with foreign machine-made products, and have an extensive sale in the northern Provinces.

Other industries include egg-products factories, some with modern machinery and equipment, small soap factories, brick and tile works, several tanneries, iron foundries, and small machine shops, etc., on which no extensive or accurate data are available.

LABOR CONDITIONS

The wage of male operatives in the cotton-mill industry is approximately 40 cents¹ a day; of female operatives, 35 cents a day.

¹ All wages are stated in Chinese dollars or fractions thereof, 1 Yuan dollar being about equivalent to \$0.50 United States currency.

Foremen receive up to \$20 a month. Board and lodging are not included in these wages. The working day is approximately 12 hours throughout the industry. It is estimated that the average efficiency of the Chinese worker is 20 per cent of the American textile worker.

Wages in the flour-mill industry are: Head miller, \$125 per month; engineer, \$50 per month; second miller, \$50 per month; machine operators, \$25 per month; coolie hands, \$12 per month. The working-day is 12 hours. There are no female workers. The wage level for flour-mill operatives is stated to be slightly higher in Tientsin and vicinity than in other industries, the principal operatives coming from flour-mill areas in the south. In addition to the above wages, a system of bonuses applies in some of the mills.

The wages of regular workers in the carpet industry average \$9 to \$10 a month, board and lodging included. Numerous apprentices are employed in this industry; a three-year apprenticeship is usually served, during the last two years of which a small yearly allowance of a few dollars is made. Board and lodging are provided. Twelve hours form the workday.

Male workers in tanneries, for the first year, receive \$2 a month, increasing after each year up to \$8 or \$10 a month after the third year. Board, clothing, and lodging are supplied; an annual bonus of about \$10 is sometimes paid. Principal workers receive from \$10 to \$20 a month. A 10-hour workday is usually followed.

Wages in match factories are on a piecework basis, the pay for male and female workers being substantially the same, $3\frac{1}{2}$ cents for 180 boxes.

Glass-factory wages run from \$11 to \$30 a month; the average is \$12 a month. Board and lodging are not provided. The workday is $9\frac{1}{2}$ hours.

Wages in brickworks run from \$8 to \$35 a month; hours of work per day, 11. Board and lodging are not furnished.

Aboveground workers at mines are paid from \$9 to \$61 a month; this wage scale, of course, includes skilled workers; the average is \$35 a month. Food and lodging are not furnished. The hours of work per day are 10.

Underground workers have an 8-hour day. Their wages run from \$8 to \$38 a month. The average is \$23 a month. Food and lodging are not furnished.

With reference to labor at the mines, it should be stated that a considerable amount of work is done by contract on a lower wage scale (paid by the Chinese contractor) than that indicated above.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The Hai Ho is navigable by steamers with a draft of 16 feet from the sea to the bund at Tientsin. This river is also known as the Pei Ho (North River) above Tientsin. Rivers and waterways other than the Hai Ho are navigable only for junks, small native boats, and motor launches. The maximum draft for boats on the inland waterways of the district is about 4 or 5 feet. With the exception of the

Hai Ho, which is kept open by ice breakers, none of the interior water routes are open from December to the end of March.

Water-borne traffic, however, in the district generally has gradually decreased with the growth of rail traffic. The various inland waterways converging at Tientsin are small and narrow, and the carriage of goods to and from Tientsin and the hinterland by water has entailed slow and uncertain transit, and frequently numerous transshipments. In 1912 the percentage of value of goods carried between Tientsin and the hinterland by rail was given as 53, and by rivers, 44 per cent; in 1921 (the latest statistics available) the percentage of rail-borne traffic had increased to 70½ per cent and the river-borne traffic had decreased to 25½ per cent. In the succeeding years since 1921 it is understood that the percentage of rail-borne traffic has shown further increase.

RAILWAYS

Following are the railway lines in operation in the district:

Pekin-Hankow Railway (head office, Peking):	Miles
Main line.....	755
Branches, total.....	61
Tientsin-Pukow Railway (head office, Tientsin):	
Main line.....	627
Branches.....	60
Peking-Mukden Railway (head office, Tientsin):	
Main line.....	526
Branches.....	173
Peking-Suiyuan Railway (head office, Peking):	
Main line.....	468
Branches.....	16½
Cheng-Tai (Shaansi) Railway (head office, Shihchiachuang, Chihli):	
Main line.....	151
Tao-Ching Railway (Taokow-Chinghau) (head office, Chiaofoo, Honan):	
Main line.....	93
Branches.....	18

The following passenger rates per English mile, based on the published fare tables for the total distance on each line, show first-class fares only. Second-class fares are two-thirds of the first-class fare, and third-class fares are one-third of the first-class fare. Additional charges are made for express trains and, on occasion, as famine relief surcharges. Fares are stated in Chinese currency.

	Per English mile
Peking-Hankow Railway.....	\$0. 0619
Tientsin-Pukow Railway.....	. 0652
Peking-Mukden Railway.....	. 0601
Peking-Suiyuan Railway.....	. 0747
Cheng-Tai Railway.....	. 0770

With the exception of rates on the Cheng-Tai line, the freight rates on all lines in this district are on a tapering scale, according to distance, and different rates apply for each of six different goods classifications.

The table below is intended to be illustrative of rates on the several lines in the district, and it will be observed that the rates on the different lines vary greatly.

Three rates are established for all lines, one on a basis of 50 kilos (110.2 pounds avoirdupois), one on the basis of a metric ton (2,204.62 pounds), and one on metric ton for carload lots. This table is based on the rate per metric ton in carload lots; the rate for metric tons not in carload lots can be ascertained by the percentage scale which is appended to the table.

[Rates in Chinese currency]

Line and distances	Class 1	Class 2	Class 3	Class 4
Peking-Hankow line:				
100 miles.....	\$15.42	\$9.64	\$8.02	\$5.93
200 miles.....	26.82	16.76	13.96	10.32
500 miles.....	52.18	32.60	27.17	20.10
Tientsin-Pukow line:				
100 miles.....	6.13	5.111	3.919	2.556
200 miles.....	11.301	9.418	7.22	4.71
500 miles.....	20.631	17.193	13.181	8.60
Peking-Mukden line:				
100 miles.....	7.22	6.12	5.02	3.92
200 miles.....	13.70	11.62	9.53	7.45
500 miles.....	29.62	25.12	20.61	16.10
Peking-Suiyuan line:				
100 miles.....	11.0257	9.451	8.191	6.614
200 miles.....	21.562	18.482	16.018	12.936
500 miles.....	41.358	35.452	30.726	24.813
Cheng-Tai line:				
100 miles.....	17.71	12.397	9.713	9.975

NOTE.—The "ton rate" (metric ton) for shipments not in carload lots varies, but may be stated as approximately as follows: Peking-Hankow line, ton rate 33½ per cent higher than rate for carload lots; Tientsin-Pukow line, ton rate 50 per cent higher than rate for carload lots; Peking-Mukden line, ton rate 50 per cent higher than rate for carload lots; Peking-Suiyuan line, ton rate 60 per cent higher than rate for carload lots; Cheng-Tai line, ton rate varies from 18 to 22 per cent higher than the ton rate per carload lot, according to the class of goods.

Through shipments may be made from points on one line to points on other lines at through rates, which, however, apparently do not vary greatly from the distance rates on each line. From time to time surcharges on freight traffic are imposed for famine relief purposes, remaining in force for stated periods of time.

Freight traffic on the Chinese Government railways is divided into six classifications, of which classes 5 and 6 pertain to such freight as coal, cement, bricks, and tiles. Class 1 covers high-value goods, such as silks, satins, velvets, furs, precious stones, jewelry, ornaments, perfumes, plated ware, etc. The following table is intended to show the goods classification on important items of imports and exports:

Important imports	Class	Important exports	Class
Cigarettes.....	2	Bristles.....	3
Cotton piece goods.....	3	Carpets.....	3
Dyes.....	2	Cotton, raw.....	4
Electrical materials.....	2	Egg albumen.....	4
Flour.....	4	Feathers.....	3
Iron and steel products.....	3-4	Furs.....	1
Leather.....	4	Hair.....	
Machinery.....	2	Animal.....	4
Medicines.....	2	Human.....	2
Oils.....		Hides, dry.....	4
Kerosene.....	2	Skins, goat.....	3
Lubricating.....	3	Straw braid.....	4
Paper.....	2	Walnuts and groundnuts.....	4
Timber.....	4	Wool.....	
Woolen piece goods.....	2	Pressed.....	2
		Unpressed.....	3

The Peking-Mukden line runs from the Chinese capital to Mukden, the capital of the Manchurian Provinces, making connection at Tientsin with the Tientsin-Pukow line, running south through Shantung to the Yangtze River, and at Fengtai (outside Peking) with the Peking-Hankow line, running south through Honan Province to Hankow on the Yangtze River, and with the Peking-Suiyuan line extending to the gateways of Mongolia. The Cheng-Tai Railway connects with the Peking-Hankow line at Chentow (Shihkiachwang), and extends to the capital of Shansi Province.

These railways have all been operating in this district for the past 10 years or more and provide this section of China with more extensive rail facilities than are enjoyed elsewhere in the country. The railways have extensively supplanted all other means of transportation, carrying more than 70 per cent of the traffic to and from Tientsin and the hinterland.

The extension of the Peking-Suiyuan line, which places the rail-head at Paotow, beyond Suiyuan, was completed in 1923. The Peking-Mukden line was double-tracked between Tangshan and Shanhaikwan during 1924.

There are at present no lines under construction.

The Tsangchow-Chentow (Shihkiachwang) line is projected by the Chinese Government, to connect at its western terminus with the Chang-Tai Railway extending to Taiyuanfu, the capital of Shansi, and, in the east, with the Tientsin-Pukow Railway at Tsangchow. The roadbed for this line, about 224 kilometers (129 miles), was laid in 1921 as a famine relief measure. It is now proposed to resume construction by laying tracks, the engineering staff to be provided from other Government lines and (when the line is completed) the rolling stock and locomotives likewise to be supplied from other railways.

ROADS

The following are the principal highways for cart and caravan transportation and date back to early times; Peking-Shahaikwan (used by carts and caravans only); Peking-Dolonnor (used by carts and caravans only); Peking-Kalgan-Urga (used also by motor vehicles from Kalgan); Peking-Taiyuanfu (thence Sianfu, Shensi); Peking-Tsinanfu.

Streets and roads available in Tientsin and the surrounding country total about 90 miles, while in Peking and environs there are approximately 195 miles of streets or roadways. Some of these are merely narrow passages over which automobiles rarely pass.

A good-roads movement for China was inaugurated in Shanghai on May 5, 1921, to stimulate and educate the people to the necessity of suitable roads for their economic betterment. In the famine period of 1920-21 the American Red Cross decided to spend its funds for relief by the construction of roads, thus furnishing employment and subsistence to famine sufferers and affording improved means of communication. The result was the construction of more than 400 miles of graded dirt highways in Chihli, Shansi, and Shantung. However, many of these roads have not been kept up and are thus falling into disuse. Among other roads completed in the last year or so are the Taiyuan-Yuncheng Highway in Shansi, a distance

of 233 miles under the road-building program of Gen. Yen Shi-Shan, governor of the Province.

Practical hope for modern road construction and upkeep undoubtedly lies in the motor transportation services that have been developing in this district, as well as elsewhere in China, in the last few years.

COST OF TRANSPORT

It is practically impossible to make definite compilations of the transportation cost per ton-mile by the several methods of transportation in the district, as so many elements enter into consideration of the rates prevailing. The following table, however, is an attempt to strike a fair average ton rate per mile under each method:

Medium	Average load	Average mileage per day	Average cost per ton-mile
Railways.....	(1).....	(1).....	<i>Chinese currency</i>
Junks.....	40 to 100 tons.....	25-35	(1) \$0.0275-\$0.0425
Carts.....	1 ton.....	25-30	.12
Pack mules.....	250 to 300 pounds.....	25	.298
Wheelbarrows.....	700 pounds.....	20	.151
Coolie carriers.....	180 pounds.....	20	.3125

¹ See freight table under "Railways."

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The telegraph lines in the district are operated by the Chinese Telegraph Administration, and the rates are the same as those prevailing in other districts of China. Telegrams in Chinese characters are transmitted in the form of numerals which are decoded by reference to a standard code book.

Cable connection is from Taku (at the mouth of the Hai River) with Chefoo and Shanghai, by agreement with the Eastern Extension and Great Northern Telegraph companies, through the Telegraph Administration office.

A Chinese wireless station of limited range and power is established at Peking. A 500-kilowatt station erected by the Japanese at Hsuangchiao, near Peking, has been completed, but has not been opened for commercial purposes. Certain other foreign military and naval wireless stations are operated in the district, but they are not available for commercial purposes. There is as yet no satisfactory wireless communication for commercial purposes with Tientsin or Peking.

TELEPHONES

Telephones at Tientsin, Peking, and larger centers are operated on the common battery system. The following table gives data concerning the telephone service:

Location	Operated by—	Number of subscribers
Tientsin.....	Chinese Government.....	7,410
Peking.....	do.....	8,221
Tangku.....	do.....	64
Paotungfu.....	do.....	350
Tangshan.....	Kailan Mining Administration.....	220
Tamingfu, Tsingfeng, Nanlo, and Kaichow.....	Private Chinese company.....	50

NOTE.—There are no automatic telephones; all are manual.

The rates of the Chinese Government Telephone Administration are about \$9, United States currency, a quarter and \$3 for each extension.

Long-distance telephone service is available between Tientsin and Peking and Tientsin and Tangku. The rate between Tientsin and Peking is about 40 cents, United States currency, for every five minutes' conversation.

The telephone has proved an important means of communication in the district, and application for new installations exceed the supply of available instruments. The equipment is generally American or German, but some Japanese equipment has been introduced in recent years. The adoption of the automatic system is being urged, though it has not been definitely decided upon.

POSTAL FACILITIES

The Chinese postal service covers the district and, with constant improvements and extensions, has greatly aided the development of trade. Through its international parcel post the Chinese postal service has become in recent years an important adjunct, especially of the fur trade. In 1920, 13,578 parcels for foreign destinations passed through Chinese and foreign posts in Tientsin; in 1923 the total reached 76,930 parcels, of which 80 per cent, it is estimated, represented fur shipments.

Foreign post offices in China were closed on January 1, 1923. Mail service throughout China is now wholly in the hands of the Chinese postal service, under the Ministry of Communications, and is efficient.

SHIPPING AND WAREHOUSING FACILITIES

Vessels drawing 16 feet of water come directly into the bund at Tientsin, and, on spring tides, vessels drawing 18 feet can reach the bund. Vessels of greater draft anchor outside the bar at Taku.

There are no docks at Tientsin, but ships tie up alongside the bunds of the foreign concessions. Docking space is under the control of the several municipal governing bodies.

At Taku cargo is transferred from the ship's tackle to lighters; at Tientsin cargo is transferred directly from the ship's tackle to the bund. At Taku Bar 400 measurement tons per 24-hour day are discharged; at Tientsin Bund, 300 tons. A 30-ton shears operates on the bund of the British concession. On general cargo from Taku Bar to Tientsin a rate of 1.10 Tientsin taels per ton is quoted, rates varying ordinarily with the nature and handling of cargoes. Rates for coolie hire in handling cargo at Tientsin Bund are: On heavy cargo, 50 tael cents per ton; on ordinary case cargo, 1½ tael cents per package.

The following table shows the number, nationality, and tonnage of vessels entered and cleared at Tientsin (including Taku Bar) during 1923:

Flag	Number	Tons	Flag	Number	Tons
American.....	93	390,396	Japanese.....	1,118	1,202,565
British.....	759	1,220,741	Norwegian.....	10	21,568
Dutch.....	19	37,034	Chinese.....	845	714,427
French.....	17	58,257			
German.....	48	207,844	Total.....	2,900	3,853,832

Warehouses or godowns are maintained by private shipping and import and export firms. Delivery of cargo arriving at Tientsin may be effected from the bund, or transferred to the shipping company's godown or to that of the company's agent. Cargo is also sometimes loaded directly from steamers to cars by means of spur-track facilities. Space on the bund is usually allowed to cargo for seven days without charges. After that a charge is made at a daily rate equal to the established monthly godown (warehouse) rate for the same class of cargo. Godowns of modern construction are located immediately on or near the bund, so that facilities for storage are convenient and adequate. Cold-storage facilities are also available.

Two tael cents per cubic foot per month is the usual warehouse charge on ordinary cargo, 5 tael cents on machinery.

PUBLIC WORKS

ELECTRIC-LIGHT PLANTS

The following list includes the principal electric-light plants:

Location	Nationality	Kilowatt lighting load	Rates	Character and nationality of equipment
CHIBLI PROVINCE				
Tientsin.....	British....	2,000	20 cents per kilowatt-hour.	2 100-kilowatt generators; 1 2,000-kilovolt-ampere turbine, alternating current, 5,000 volts, 50 cycles, 3 phase; 220/440 volt direct current and 220/380 alternating current; British equipment.
	Belgian....	9,000	25 cents.....	Belgian and Swiss equipment; also supplies tramways; alternating current, 5,000 volts, 50 cycles, 3 phase; 220 volts for lights.
	French....	4,000	15 to 28 cents.....	French equipment; 220 volts, 50 cycles, 3 phase, alternating current.
Peking.....	British....	200	50 cents per month per light.	Supplies Legation Quarter; British and German equipment; 220 volts, direct current.
	Chinese....	2,900	24 cents per unit..	3 phase, 50 cycles, 3,000 volts, alternating current, 220 volts for lights.
Paotingfu.....	do.....	475	.....	Alternating current, 2,300 volts, 50 cycles, 3 phase.
Chentow.....	do.....	2,000	.....	American; 2,300 volts; 60 cycles; 3 phase, alternating current; light voltage 220.
SHANSI PROVINCE				
Taiyuanfu.....	do.....	300	\$1 per month, 16 candlepower.	300-kilowatt turbo-generator; 3 phase, 60 cycles; 2,300 volts; American.

The above list covers the principal plants only. Some towns in the district are supplied with electricity from small portable plants, and some are supplied in part with light from railway shops, cotton and flour mills, etc.

The British municipal plant at Tientsin supplies electric current to the British concession areas and to the former German concession area. The French plant supplies the French and Japanese concessions. The Belgian company, besides operating the tramways, lights the Italian and Belgian concessions, the former Russian and Japanese concessions, and the native city.

At Chinwangtao, the Kailan Mining Administration's plant supplies a current of 200 volts, 50 cycles, alternating. At Shanhaikwan light is supplied from the workshops of the Peking-Mukden Railway, the current being 200 volts direct. Tangshan is lighted in part by the Peking-Mukden Railway shops, and part by the plant of the Kailan Mining Administration, which has erected a large electric plant at Linhsi, said to be one of the best in China.

WATERWORKS

The Tientsin waterworks of the British Municipal Council supplies the British and ex-German concessions, and the Native City Waterworks Co., a British limited company, supplies the Chinese city as well as the French, Italian, Japanese, and the ex-Russian and ex-Austrian concessions with water. The British system has a maximum capacity of 1,000,000 gallons daily, with a reserve storage tank of 500,000 gallons capacity. The Native City system has a maximum daily capacity of 4,500,000 gallons and a normal output of 3,000,000 gallons. The charges under the British municipal system are \$1 Yuan per 1,000 gallons, and under the Native City Co. 70 cents, local currency, per 1,000 gallons.

The Peking Waterworks Co. (Ltd.) is organized under Chinese management, but employs foreign engineers. It has a number of stations throughout Peking and a daily pumping capacity of about 3,000,000 gallons.

TRAMWAYS

The tramway at Tientsin is operated by the Compagnie de Tramways at d'Éclairage de Tientsin, a Belgian concern. The length is 8.2 English miles, double-tracked. The power-plant capacity is 9,000 kilowatts, 3-phase, 50 cycles, 5,000 volts, alternating current, high tension; 550 volts direct current for tramway motors. This plant also supplies electric light for the native city and certain of the concessions.

This tramway was established in 1906. It hauls approximately 4,000,000 passengers per month, in 114 cars. The track is of meter gauge, the rails are 92.8 pounds per yard, and the rolling stock of Belgian manufacture. Like all tramways in the Far East, it is patronized almost exclusively by the natives, in this instance Chinese.

In the capital the Peking Tramcar Co. (Sino-French) has four lines, planned to attain a total length of 12.8 miles. This system began operating in December, 1924.

CONSERVANCY WORKS

Conservancy work on the Hai River, connecting Tientsin with the sea, was necessitated by the rapid deterioration of the river to the point where for periods even lighters could not come up to Tientsin. The commission established in 1898 ended with the Boxer troubles of 1900, but a new international commission was established in 1901 and has since functioned with marked success. The Hai Ho is the common mouth of nearly all the rivers running through Chihli

Province, and is too small to discharge them in time of simultaneous spate. The problems were to straighten the river, thus promoting tidal influence and shortening the distance to the sea; to keep out silt, discharge storm water, and deepen the water over the bar at the mouth of the river.

Three of the largest canals drawing water from the Hai Ho have been controlled by locks, and bends in the river have been cut off, saving 12 miles or more of distance, and increasing the tidal range. Whereas in 1898 the river was not navigable, in 1919 a steamer drawing 15 feet could proceed to Tientsin on an ordinary tide. The bar at the entrance has been dredged and deepened from 10 feet in 1908 to 16 feet ordinary high water in 1922.

The conservancy work is maintained from funds derived from river dues equal to 4 per cent of customs duties on all cargo, and shipping taxes on registered tonnage.

IMPORT AND EXPORT TRADE

In spite of floods, famine, and civil war, which occurred during 1924 throughout the Tientsin consular district, Tientsin's total trade for the year exceeded that of the previous year by 581,009 haikwan taels, or about \$465,000. Tientsin exports for 1924, according to the Chinese Maritime Customs, were valued at 88,607,319 haikwan taels, as compared with 86,420,212 taels for 1923, an increase of 2,187,107 taels. Imports, on the other hand, showed a slight falling off, from 104,866,551 haikwan taels for 1923 to 103,260,453 taels for 1924, a decrease of 1,606,098 taels.

Following is a summary (with figures converted to United States currency) of the trade of the ports of Tientsin and Chinwangtao during the years 1903, 1913, 1923, and 1924:

Ports, and character of trade	1903	1913	1923	1924
	<i>U. S. currency</i>	<i>U. S. currency</i>	<i>U. S. currency</i>	<i>U. S. currency</i>
Tientsin:				
Exports.....	\$8,489,253	\$28,226,411	\$71,603,564	\$71,771,928
Imports—				
Foreign goods.....	23,976,846	51,756,269	84,237,156	83,640,967
Chinese goods.....	12,765,408	18,052,376	40,863,941	49,303,410
Total imports.....	36,742,254	69,808,645	125,101,097	132,944,377
Total exports and imports.....	45,231,507	98,035,056	196,704,661	204,716,305
Chinwangtao:				
Exports.....	1,521,070	3,121,264	12,497,078	8,586,868
Imports—				
Foreign goods.....	3,241,388	3,529,464	2,614,469	3,042,907
Chinese goods.....	429,047	1,249,032	1,735,639	2,677,783
Total imports.....	3,670,435	4,778,496	4,350,108	5,720,690
Total exports and imports.....	5,191,505	7,899,760	16,847,186	14,307,558

IMPORTS

The table following gives details of the imports at the port of Tientsin:

[Quantities are in thousands of units given; values in thousands of United States dollars]

Articles	1903		1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Textiles:								
Cotton manufactures.....		12, 230		26, 021		20, 200		17, 820
Woolen and woolen goods.....		182		214		1, 706		1, 471
Miscellaneous piece goods, canvas, cotton duck, and flessian cloth..... yards	185	12	1, 261	166		210		300
Metals and minerals:								
Iron and steel, all kinds..... pounds..	20, 276	446	69, 921	1, 373	92, 390	3, 029	144, 943	4, 788
Copper products, slabs, sheets, tubes, wire, etc..... pounds..	1, 028	142	1, 802	301	2, 812	498	6, 795	1, 010
Bags, cotton, gunny, hemp, straw, and grass, new and old.....		14		159		301		273
Belting, machine.....				11		94		84
Bicho do mar, black..... pounds..	345	115	366	78	489	243	593	293
Building materials.....		53		33		145		269
Butter..... pounds..		24	256	63	243	106	315	109
Buttons, brass and fancy..... gross..	241	121	167	55	201	46	424	38
Candles.....		28		54		65		1
Candle-making materials.....				4		112		18
Cereals:								
Rice..... pounds..	275	6	41, 184	970	141, 339	5, 221	59, 186	2, 076
Wheat..... do.....			3		47, 290	1, 099	13, 000	3, 316
China ware.....		17		32		142		124
Cigarettes.....		24		35		138		176
Cigars..... thousands..	327	1, 072	3	1, 539	1, 239	3, 065	932	2, 666
Clocks and watches..... do.....		27	6	50	4	108	3	92
Clothing.....		80		83		140		222
Confectionery.....		69		41		113		64
Cotton, raw..... pounds..		6	1	19		28		32
Dyes, colors, and paints:					6, 111	1, 448	299	76
Aniline.....		200		869		1, 308		1, 348
All other.....		180		926		2, 274		3, 193
Electrical materials.....		80		211		695		713
Enameled ware.....		11		114		134		261
Flour, wheat..... pounds..	1, 925	39	18, 565	385	192, 715	5, 559	179, 843	4, 911
Glass and glassware.....		155		186		453		5, 667
Haberdashery and millinery.....		36		347		684		555
Hardware.....		47		146		430		272
Hats and caps..... number			307	66	392	133	310	153
India-rubber tires.....		2				36		8
India-rubber manufactures, other.....		38				123		59
Leather, all kinds.....		256		556		514		254
Machinery, miscellaneous.....		418		349		2, 209		2, 064
Matches.....				458		4		7
Match-making material..... pounds..			5, 271	141	16, 097	527	15, 671	790
Medicines.....		69		200		314		484
Milk, condensed, in tins..... pounds..		21		80	1, 049	170	775	146
Needles..... thousands..	659	124	775	113	916	256	1, 634	415
Petroleum products:								
Engine oil..... American gallons..		8	256	70	1, 276	368	1, 151	395
Gasoline..... do.....			61	9	1, 004	455	659	259
Kerosene—								
American..... do.....	2, 294	366	12, 210	1, 001	27, 337	6, 013	29, 198	6, 091
Russian..... do.....	6, 436	821						
Sumatra..... do.....	1, 119	141	15, 190	1, 067	357	79	1, 041	487
Paper and stationery.....		235		906		2, 327		2, 409
Perfumery.....		10		23		127		208
Photographic material.....		35		52		110		139
Railway materials.....			2, 004	1, 789		1, 491		1, 517
Seaweed..... pounds..	5, 593	68	8, 067	120	11, 711	324	8, 632	260
Silk, artificial.....				751		496		446
Soap.....		70		192		319		355
Soda..... pounds..	2, 539	40	13, 894	180	24, 113	421	26, 613	468
Sugar, all kinds.....		1, 133		3, 158		4, 726		6, 285
Timber, all kinds.....		525		1, 250		665		1, 020
Toilet requisites.....		19		165		170		95
Tobacco, leaf.....				5		584		1, 107
Vehicles:								
Bicycles and parts.....		12		25		212		475
Motor cars and parts.....				71		530		702
Tramway material's.....				120		779		326
Wines, beers, whiskies.....		259		348		562		533
Wireless apparatus.....						95		30
All other articles.....		2, 602		3, 407		9, 300		6, 356
Net total imports.....		23, 977		51, 757		84, 237		83, 641

Industrial developments during and following the war period have led to an increased demand for machinery for factories, mills, and mines, in the fulfillment of which America has played a leading part. During 1923, however, imports of machinery dropped off by 2,250,000 taels, primarily because of unsettled conditions. America supplied 39 per cent, Great Britain 27 per cent, Germany 13 per cent, and Japan 10 per cent, the remainder being distributed among various European countries.

In piece goods, for the four years 1919 to 1922, Japan contributed 65 per cent, Great Britain 27 per cent, and the United States 8 per cent. With the exception of imports from Great Britain, the purchases during 1923 showed a decided falling off. Japan's share was 64 per cent, Great Britain's 33 per cent, and the United States, 3 per cent.

Importations of wheat and flour experience seasonal fluctuations, varying with comparative crop conditions and price levels as between China and other countries, notably the United States and Canada. There have been large increases in the importation of foreign flour and foreign wheat. During the four years ending 1922 imports of flour amounted to 52,196,666 pounds, while imports for 1923 totaled 192,715,200 pounds, and for 1924 179,843,200 pounds. The increase in the importation of foreign wheat during the four years ending 1922 was not so great, averaging about 45,333,000 pounds per year, as compared with 47,290,133 pounds for 1923. In 1924 there was a sharp decrease to 13,000,000 pounds.

Tientsin is the distributing center for approximately 20 per cent of all colors and dyes imported into China. There is a steadily increasing tendency on the part of the Chinese to substitute foreign-manufactured synthetic dyes for vegetable dyes of native origin. In recent years German manufacturers have been making strenuous efforts to recapture the trade in dyes and chemicals that they lost during the war. At present Germany can be credited with about 75 per cent of the trade in dyes, 15 per cent come from America, and the remainder, in small amounts, are supplied by Swiss, French, British, and Japanese manufacturers.

Imports of illuminating oils continue to show considerable increases, the United States dominating the trade. Other articles for which there is a demand are paper, glass, chemical products, aniline dyes, stoves and grates, worsted and other woolen goods, leather and leather goods, soap and toilet articles, medicines, hardware, metals, galvanized iron, roofing and flat sheets, enameled ware, ironware, and tobacco. In this category also belong machine tools for engineering, carpentry, iron forges, bicycle and motor-car works, as well as hand machines for sewing, printing, knitting, hat making, grain cleaning, washing, and pumping. There is also an appreciable demand for motor cars, bicycles, typewriters, furniture, industrial machinery, knitting machines, mining and smelting apparatus, and other articles that usually find markets in a region of vast potentialities newly opened to modern development and foreign exploitation. Among articles for which there is a constant demand are watches and clocks, jewelry, phonographs and accessories, photographic materials, mirrors, candles, lamps and lamp ware, clothing, hats, hosiery, boots, and shoes. The United States already

participates to a considerable extent in supplying these lines, which offer a favorable field for extension. The chief competitors of the United States in this market are Japan and various European countries. In many of these lines Japan and the European countries are ahead of the United States. The leading lines in which Japan has to a great extent replaced American and European goods in this market are piece goods, chemical products, electrical materials, paper, and indigo dyes.

EXPORTS

A detailed statement of exports from Tientsin during the years 1903, 1913, 1923, and 1924 is given below:

[Quantities are in thousands of units given; values in thousands of United States dollars]

Articles	1903		1913		1923		1924	
	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value	Quan- tity	Value
Cotton goods, all kinds.....				172		428		80
Metals and minerals: Brass, iron, metal dross, etc.....				68		82		78
Almonds.....pounds.....	1, 147	106	4, 459	487	(1)	(1)	(1)	(1)
Animals, living: Cattle.....number.....			35, 310	465	96, 353	2, 201	70, 716	1, 058
Beans, total.....pounds.....			42, 626	237	47, 475	615	36, 437	519
Bones, refuse.....do.....	9, 044	26	19	42, 379	588	48, 419	673	
Bran.....do.....			2, 434	1, 410	3, 372	2, 751	2, 529	2, 741
Bristles.....do.....	2, 047	618	4	1	2, 305	341	1, 334	194
Candles.....do.....				60	4, 439	3, 440	5, 514	4, 464
Carpets.....square feet.....		8		33	142, 164	660	92, 888	418
Cement.....pounds.....		1	7, 217	3, 621	100	6, 704	289	7, 089
Chestnuts.....do.....	1, 044	10		62	1, 111	651	1, 239	715
Cigarettes.....do.....			114	343	284	1, 508	238	1, 222
Coal.....tons.....	27	113	1	5	8	81	5	57
Coke.....do.....			2	44, 851	5, 916	75, 347	15, 698	55, 405
Cotton, raw.....pounds.....	32	2	104	388	343	343	292	12, 197
Curiosities.....do.....			16, 435	731	31, 839	1, 170	28, 078	1, 233
Dates.....pounds.....	12, 252	258						
Egg albumen and yolk, dried and moist.....pounds.....			702	31	5, 603	1, 404	8, 433	2, 122
Egg, fresh.....thousands.....			75	410	285	2, 854	365	2, 060
Fibers, hemp and jute.....pounds.....			11, 169	474	3, 466	156	2, 190	157
Firecrackers.....do.....			49	3	1, 328	189	650	94
Groundnut cake and pulp.....do.....			3, 181	66	7, 731	106	1, 519	21
Groundnuts.....do.....	13, 299	171	61, 216	1, 217	52, 368	1, 856	43, 041	1, 527
Hair:								
Animal.....pounds.....		116		301		325		426
Human.....pounds.....	8	1	568	54	699	113	660	90
Hides:								
Ass and horse.....do.....	137	14	1, 075	136	2, 002	387	907	205
Buffalo and cow.....do.....	1, 312	131	3, 591	679	349	74	398	83
Horns, deer, young.....pairs.....	5	102	3	77	3	208	2	137
Intestines:								
Pigs'.....do.....		1		94		863		848
Sheep's.....do.....		3		6		431		703
Licorice.....pounds.....	1, 543	75	2, 283	203	6, 464	795	4, 598	503
Matches.....gross.....					599	106	195	43
Mats, straw and rush.....do.....		48		512		337		316
Medicines.....do.....		277		498		307		634
Mushrooms.....pounds.....	58	28	107	90	193	215	125	137
Oil:								
Castor.....do.....			4		795	59	1, 867	136
Groundnut.....do.....			375	16	5, 014	340	6, 746	471
Pears, fresh.....do.....	6, 701	36	6, 933	64	14, 619	203	22, 071	354
Salt.....do.....			79, 486	235	53, 324	1, 317	58, 969	1, 612
Samshu.....do.....	3, 259	117	14, 427	524	10, 627	426	4, 916	269
Seeds:								
Apricots, bitter and sweet.....pounds.....					2, 592	361	3, 952	422
Cotton.....do.....			18, 191	127	36, 221	421	17, 880	208
Linseed.....do.....			27, 265	436	17, 133	115	12, 143	322
Melon.....do.....	453	40	7, 756	325	5, 291	298	2, 240	133
Mustard.....do.....					9, 375	176	5, 621	116
Rape.....do.....			30, 878	470	2, 071	39	871	18

* See "Seeds, apricot."

[Quantities are in thousands of units given; values in thousands of United States dollars]

Articles	1903		1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Skins and furs, total.....	-----	1,965	-----	3,177	-----	5,791	-----	6,100
Soda products.....	-----	5	-----	20	-----	119	-----	51
Straw braid.....pounds.....	4,447	813	1,017	339	7,523	2,832	6,988	2,678
Tallow, animal.....do.....	49	1	2,448	147	523	46	484	42
Tobacco, prepared.....do.....	9	1	-----	2	8,712	1,748	8,168	1,612
Vegetables, dried and salted.....do.....	1,371	52	4,000	196	5,584	311	6,066	331
Walnuts.....do.....	957	24	6,341	142	7,377	635	12,716	1,080
Wool:	-----	-----	-----	-----	-----	-----	-----	-----
Camels'.....do.....	1,714	122	3,724	548	6,853	1,759	5,043	1,654
Goats'.....do.....	332	45	1,421	260	1,700	397	3,213	1,006
Sheep's.....do.....	15,774	1,209	29,558	4,398	42,564	7,751	58,352	10,627
All other articles.....do.....	-----	1,846	-----	1,391	-----	3,858	-----	3,935
Total.....	-----	8,489	-----	28,226	-----	71,604	-----	71,772

The total value of exports of cotton from Tientsin nearly doubled during the 10-year period 1913-1923. The development of the cotton-mill industry in North China has served to stimulate cotton growing, and the export of raw cotton has kept pace with its increased cultivation in the adjacent hinterland. At present Tientsin exports about 25 per cent of China's cotton.

Exports of wool have also shown very large increases. Of China's total wool clip, 85 or 90 per cent passes through the port of Tientsin, though some contributing areas are so distant that a year's time is required to get their product to Tientsin. Wool from Outer Mongolia, Chinese Turkestan, and distant Kansu find their outlet at this port.

The manufacture of Chinese rugs for export is a development of recent years, and rugs may now be said to constitute one of the principal exports of manufactured products. Eighty-nine per cent of China's rug exports passed through Tientsin in 1923.

Sausage casings form one of the principal exports. Contributing territory includes Shantung, Chihli, Honan, Shansi, Shensi, Kansu, Sinkiang (Chinese Turkestan), Mongolia, Manchuria, and Siberia. The export of casings has witnessed a steady growth since the period following the Great War, and may be regarded as capable of still further development. Tientsin had 40 per cent of China's export trade in casings for 1923.

Of egg albumen and yolk during 1923, Tientsin contributed about 13 per cent to China's export trade, the leading ports being Shanghai and Hankow. Of eggs, fresh and preserved, however, Tientsin contributed 30 per cent of China's total as port of origin, the two other leading ports being Tsingtao and Shanghai.

The disruption of trade in Russia during the past few years has resulted in diverting through the port of Tientsin furs and skins that formerly were sent through Moscow and Liepzig. Foreign buyers have also discovered that China, Manchuria, and Mongolia represent a cheaper source of supply than other exporting countries. As a result, exports of furs have increased year by year. This situation will undoubtedly obtain until such time as a return to former established trade channels is effected in Russia. Furs shipped through Tientsin include squirrel, rabbit, fox, sable, kolinsky,

weasel, and marmot. Lamb, goat, and kid skins, as well as dog mats and horsehides, form the bulk of the hide and skin exports.

The manufacture of straw braid is a widely distributed industry throughout North China, and Tientsin is an important exporting center for this commodity. During 1923, 63 per cent of China's total export of straw braid passed through the port of Tientsin, chiefly to the United States.

Walnuts, peanuts, beans, horsehair, licorice, oilseeds, and groundnut cake and pulp are other exports, Tientsin leading all China ports in exports of walnuts, groundnuts in shell, licorice, and cottonseed.

It is of interest to note that in 1903, of the total export of Chinese produce of North China origin, only 10 per cent was shipped directly to foreign countries and Hongkong. In 1913, 20 per cent went to foreign countries and Hongkong; while in 1923, 60 per cent was shipped directly to such foreign destinations, and only 40 per cent to Chinese ports. Since 1903 foreign export houses have found it desirable, instead of attempting to handle North China products through Shanghai, to establish houses nearer the source of supply and export directly from Tientsin to foreign markets. The improvement of the Hai River has brought about the result that British, Japanese, German, and American ocean-going freighters now carry a heavy percentage of the exports of Tientsin directly to foreign ports without the necessity of transshipping from coasting steamers at Shanghai or Japan ports. There is still a considerable volume of shipments by coasting steamer to Shanghai for transshipment abroad, but the business is handled at Tientsin and the cargo routed via Shanghai instead of entering into the market there.

The increased volume of trade and the extension of trading facilities in the form of foreign import houses, banks, etc., have resulted in the past 20 years in detaching Tientsin very largely from its former position of substantial dependence upon Shanghai.

CHINWANGTAO TRADE

Chinwangtao for many years served as the winter port or "jetty" for Tientsin trade during the winter months, but with the improvement of the Hai Ho and shipping facilities at Tientsin, where the river is kept open in winter by ice breakers, the port of Chinwangtao assumes less importance in the trade of the district as a whole.

The principal items of foreign imports are machinery and equipment for the Kailan mines and the Tangshan cement works and rolling stock and equipment for the Peking-Mukden Railway. Kerosene is another important item of import. With respect to these items especially, which form the bulk of the import trade, Chinwangtao may be said to have a trade of its own of quite respectable proportions.

The export trade is made up principally of exports of coal, cement, fire brick, and fire clay. The development of the Kailan coal fields has resulted in an increase in the coal exports from Chinwangtao from approximately 100,000 tons in 1903 to 746,486 tons in 1913 and 2,075,715 tons in 1923, exclusive of supplies for steamers' bunkers.

MONEY, BANKING, AND CREDIT

BANKS

The table below shows the leading banks handling foreign exchange and bills in the Tientsin consular district:

Name	Nationality	Head office	Capital	Branches in cities in district
International Banking Corporation..	American.....	New York, N. Y.	¹ \$10,000,000.	Tientsin and Peking.
American Oriental Banking Corporation.	.....do.....	Shanghai.....	² \$428,949.	Tientsin.
Hongkong & Shanghai Banking Corporation.	British.....	Hongkong.....	³ \$20,000,000.	Tientsin and Peking.
Chartered Bank of India, Australia & China.	.....do.....	London.....	£3,000,000.	Do.
Banque de L'Indo-Chine.....	French.....	Paris.....	68,400,000 francs.	Do.
Banque Franco-Chinoise.....	.....do.....	.....do.....	10,000,000 francs.	Do.
Russo-Asiatic Bank.....	Russo-French.....	.....do.....	55,000,000 rubles.	Do.
Yokohama Specie Bank.....	Japanese.....	Yokohama.....	100,000,000 yen.	Do.
Bank of Chosen.....	.....do.....	Seoul, Chosen.....	80,000,000 yen.	Do.
Banque Belge pour l'Etranger.....	Belgian.....	Brussels.....	75,000,000 francs.	Do.
The Italian Bank for China.....	Italian.....	Shanghai.....	\$1,000,000 gold.	Tientsin.
Chinese-American Bank of Commerce.	Chinese.....	Peking.....	³ \$7,500,000.	Tientsin and Peking.

¹ Capital and surplus, in United States currency.

² United States currency.

³ Chinese currency.

CREDITS

Local export firms purchase export cargo in the open market or, as is often the case, make their purchases on a forward-contract basis from interior dealers. Upon acceptance by the foreign buyer of the Tientsin firm's offer, the usual procedure is for the buyer to open a credit in favor of the Tientsin exporter. If the credit is opened, the exporter generally requests and is usually granted advances in the form of packing credits from the bank in which the credit has been opened. If no credit has been opened, the exporter generally has recourse to his own bank for packing credits in the form of overdrafts. When a foreign bank grants a packing credit to a Tientsin firm it allows the firm to draw on the bank up to practically the full value of the goods to be shipped, and the bank generally expects, and sometimes insists, that an equivalent amount of exchange be settled with them before the credit is granted. In return the firm gives a letter of guaranty in which it undertakes to hold the cargo at the disposal of the bank fully insured against all risk. The interest charged is from 7 to 8 per cent. The goods in question may be stored in the firm's own godown (warehouse) or in a godown designated by the bank. The arrangement continues for a period long enough to allow the firm to purchase the goods, pack, and ship them.

The extension of packing credits by the banks is entirely optional on their part unless the export credit opened specifically provides for packing credits.

Credit extensions made to local importers vary considerably, depending on the reputation of the concern, the nature of the goods, the volume of sales, the state of competition, and other considerations. The usual practice is for the local importer to arrange with his local bank for the opening of a credit with a foreign correspondent bank in favor of the exporter abroad; against this credit the local bank may or may not require the deposit of security or collateral, the amount in any case depending upon the reputation of the firm and the nature of the goods. As there is no local acceptances market, drafts are drawn on the local importer instead of the local bank, the acceptance of the former being considered in the light of an undisputed instrument of liability.

Upon receipt of the documents and the acceptance of the draft, the cargo remaining under custody of the bank, deliveries may be effected to Chinese dealers during the term of the draft in the following manner: Chinese dealers are usually allowed to take delivery of import goods by installments, paying against installments usually by native orders. The native order is due in from 5 to 10 days and is generally regarded as the equivalent of cash. The Chinese dealer is usually given two months in which to clear cargo, but the term varies, according to the nature of the goods.

The native order, in effect, is nothing more nor less than a post-dated check by the Chinese dealer on his Chinese bank. Native orders in the form of cashiers' checks of native banks do not circulate to any great extent in Tientsin. It was at one time the practice of native banks to certify the checks or native orders of dealers, and they then became the obligation of the native bank, but this practice has now largely ceased. Native orders, in the sense of post-dated checks by Chinese dealers on native banks, are, however, quite common. They usually cover a 5 or 10 days' period and are considered as no more reliable than the credit of the drawer, since of course no responsibility is assumed by the native bank unless the check is "certified" by the bank.

Business transactions and credits between the foreign firms and the Chinese buyer are generally arranged through the medium of the foreign firm's comprador, the comprador system applying in Tientsin as elsewhere in China.

No standard practice with reference to credit extensions can be said to exist in the district. Import merchants require such terms of credit from American exporters as will permit their meeting the competition of European products offered on a basis of liberal credit extensions. Competition in this field is keen, and American manufacturers who anticipate entering this market must be prepared to offer terms in line with those of competing manufacturers of other countries.

Local banks are in a position to know what credit extensions can be made to local firms of foreign nationality. From the head offices of American banks having branches in this district, credit reports can be obtained on any local firm of foreign nationality.

Not many Chinese firms are sufficiently familiar with foreign business procedure to deal directly with foreign countries; in consequence, import transactions are usually negotiated through the medium of a local firm of foreign nationality. American exporters

should not fail to investigate requests for credit extensions on the part of Chinese concerns prior to granting such extensions.

LOCAL CURRENCY SITUATION

The currency situation is as complicated in this district as it is elsewhere in China.

Prior to the revolution of 1911-12 the Peiyang dollar was in general use, and many are still in circulation. The Yuan dollar, the new dollar currency of the Republic, has, however, supplanted the Peiyang and provincial dollars formerly in use. Exchange fluctuations have a marked effect on both import and export trade; the silver currency of China fluctuates daily and hourly in comparison with gold. High silver militates against exports and favors imports. In January, 1920, the Chinese silver dollar was worth \$1.08 United States currency; in March, 1921, only \$0.31. In June, 1922, the silver dollar at Tientsin had a value of \$0.57 United States currency, and at the end of 1924, \$0.547.

ADVERTISING

There are approximately 300 newspapers published in the consular district—10 in English, 2 in French, and the remainder in Chinese. Most of these papers are published in Tientsin and Peking. The following is a list of the principal ones:

Name	Publication	Language	Ownership (nationality)	Estab- lished	Esti- mated circula- tion
TIENTSIN					
North China Star	Daily	English	American	1918	3,000
Peking and Tientsin Times	do	do	British	1894	1,600
North China Daily Mail	do	do	do		300
China Advertiser	Weekly	do	Japanese		200
Echo de Tientsin	Daily	French	French		300
China Illustrated Review	Weekly edition of Peking and Tientsin Times.	English	British		600
T'ai Wu Shih Pao	Daily	Chinese	Chinese	1917	9,600
I Shih Pao	do	do	do	1915	37,000
Ta Chung Hua Shang Pao	do	do	do	1920	10,000
Ho Pei Erh Pao	do	do	do	1919	7,900
PEKING					
North China Standard	do	English	Japanese		
Journal de Peking	do	French	French		
Far Eastern Times	do	English and Chinese	Chinese	1923	4,500
Peking Leader	do	English	do	1918	
Peking Daily News	do	do	do	1908	
Shun T'ien Shih Pao	do	Chinese	do		
I Shih Pao	do	do	do	1916	
Ching Pao	do	do	do	1918	
Ch'en Pao	do	do	do	1918	

Quotations on advertising rates are, in general, meaningless; they will vary with the inquirer and from day to day. Much the same advertising methods successful in the United States are employed in North China, with necessary modifications and allowances for the differences in the degree of literacy and the psychology of the potential

buyer. The newspaper, the billboard, handbills, calendars, motion pictures in the larger cities, placards in trolley cars, all are employed as advertising mediums. Electric signs are used both in Peking and Tientsin, but so far to a limited extent.

MERCHANDISING METHODS

As there are few Chinese firms in the Tientsin district equipped for direct foreign trade, most of the foreign trade is carried on through American, European, and Japanese import and export houses, acting on their own account or as agents for foreign principals. A number of such houses have branches or connections in the United States. In establishing China agencies it is preferable that American agencies be placed with American firms, if possible. Where the market in particular lines offers promise of business of sufficient volume, the American exporter might be well advised, after an intensive study of the field by his trained representative, to establish his own branch office, but this measure is recommended only for lines in which there is a permanent and extensive demand. In other cases it is frequently found that representatives of the American manufacturers—expert technicians or salesmen—can effectively be employed on the staffs of the China houses acting as agents, thus insuring to the American exporter not only the facilities, experience, and prestige of the established China house (a matter of outstanding importance) but the opportunity for direct representation of fairly reasonable cost for the purpose of detailed study of the market and active promotion work. Representatives should always be very carefully selected and be men of good reputation and bearing. It should be understood that nothing of permanent value can be accomplished in China by “rush” and impatience.

TRAVEL FACILITIES

The following table shows the principal hotels at Peking and Tientsin, with rates, cable addresses, etc.:

Name of hotel	Nationality of ownership	Cable address	Rates, including meals ¹				
			Single, room with bath	Single, room without bath	Two persons, room with bath	Single, per month	Two persons, per month
PEKING							
Grand Hotel de Pekin ²	French.....	Pekinotel.....	\$10-\$15	-----	\$18-\$25	\$175-\$300	\$300-\$500
Grand Hotel des Wagon Lits. ²	British.....	Wagonlits.....	9	\$8	18	150- 175	300- 350
Ambassador Hotel ³	Chinese.....	Ambassador	8	6-7	13	120- 140	220
TIENTSIN							
Astor House ²	British.....	Astor.....	⁴ 10	⁴ 8	⁴ 18	200	⁴ 250
Court Hotel ²	do.....	Court.....	12	10	18-19	200- 250	300- 350
Imperial Hotel ²	do.....	Hotelimp.....	9	7-8	16	140- 160	300

¹ Chinese currency, Yuan dollars.

² American plan.

³ American or European plan.

⁴ Minimum rate.

While not always necessary, it is advisable to telegraph a few days prior to arrival at Tientsin or Peking to obtain accommodations at the hotels.

A knowledge of Chinese is not essential for travel on the main routes; hotel clerks and railway conductors speak English. A valid passport is indispensable for identification purposes as well as travel.

TRADE ORGANIZATIONS

Following is a list of important trade organizations in the Tientsin consular district:

American Chamber of Commerce, Tientsin.
American Chamber of Commerce, Peking.
British Chamber of Commerce, Tientsin.
British Chamber of Commerce, Peking.
Tientsin General Chamber of Commerce; international.
French Chamber of Commerce, Tientsin.
German Chamber of Commerce, Tientsin.
Tientsin Chamber of Commerce: Chinese.
Peking Chamber of Commerce: Chinese.
Japanese Chamber of Commerce, Tientsin.
Japanese Chamber of Commerce, Peking.
Italian Chamber of Commerce, Peking.
Tientsin Rotary Club; international.
Peking Rotary Club; international.
Chinese Bankers' Association, Tientsin.
Chinese Bankers' Association, Peking.
Foreign Exchange Bankers' Association, Tientsin; international.
Foreign Exchange Bankers' Association, Peking; international.

The chambers of commerce and Rotary clubs listed above function in about the same way as similar organizations in the United States, but their organization is usually limited by comparatively small membership.

PROPERTY VALUES AND RENTS

Property values in different sections of the concessions and the native city of Tientsin vary so greatly that it is not possible to make definite statements of value. In general the value of land in all sections is steadily rising. In the business sections of the concessions values range from 10,000 taels (\$8,000 United States currency) per mow (one-sixth of an acre) to 50,000 taels (\$40,000 United States) per mow, depending on location. Practically all of the land in the present business section of the foreign concessions is built on, and the above values necessarily include valuations on the structures as well; many buildings are old, however, and of limited value. The prices for land in the residential areas vary from 2,000 taels (\$1,600 United States) per mow to 7,000 taels (\$5,600 United States) per mow.

In certain of the business blocks in the British concession land tenure is on a 99-year Crown lease from the British Government, almost two-thirds of which lease has expired. Certain terms for indefinite extensions have been proposed, but the matter is not settled. This feature of the situation enters into land values in the business section of the British concession, one of the most important sections of the port.

Office rentals vary according to the location of the offices and the condition of the building. For steam-heated, electrically lighted offices in the business sections of the British and French concessions the monthly rentals range from 4 taels (\$3.20 United States) to 16.50 taels (\$13.20 United States) per 100 square feet of floor space. Many of the office buildings are old, but there are a few that have been recently erected, are well lighted and airy, and have built-in vaults and strong rooms and other improvements.

Rentals for residential purposes vary from \$100 Yuan (say, \$57 United States), to \$140 Yuan (say, \$80 United States) a month for a four-room house. For larger residences the prices will range upward at about \$25 local currency (say, \$14 United States) a month for each extra room. These rentals are for residences in the more desirable sections, where practically all foreigners live, and for houses with indirect heating systems and sanitary plumbing installations.

Godown (warehouse) storage charges vary considerably with the articles and also with the location and condition of the warehouse. A nominal charge for the storage of native cotton or wool is 10 tael cents per native bale per month; on piece goods the charge is about 15 tael cents per month per case. Godown space can also be had by the cubic foot; a charge of 2 tael cents per month per cubic foot may be considered normal. One or more rooms, or a floor, of a godown will bring a rental on the basis of about 25 tael cents per square foot of floor space. An entire godown may be rented for less; the lowest estimate obtained is 10 tael cents per square foot. These rates will, of course, vary greatly with the demand for storage space, terms of rental, nature of the goods, and season through which the rental extends.

TAXES AND OTHER ASSESSMENTS

Taxes and assessments at Tientsin are collected from the owner of the property; these items naturally are taken into consideration by the owner in fixing rentals. Their character is indicated below:

British concession.—Land tax, 1 per cent of the assessed value of all land except marshland or undeveloped land, which is taxed at the rate of 1 tael per mow a year; tax on rentals, 11 per cent of the assessed rental value of the property.

French concession.—Land tax, 1 per cent of the assessed value; tax on rentals, 8 per cent of the assessed rental value.

Ex-German concession (known as "First special administrative area").—Land tax, 1 per cent of the assessed value; rental tax, 5 per cent of the assessed rental value of the property.

Ex-Russian concession ("Third special administrative area").—Land tax, seven-eighths of 1 per cent of the assessed value; rental tax, 6 per cent of the assessed rental value.

Italian concession.—Land tax, three-fourths of 1 per cent of the assessed value; rental tax, 5 per cent of the rental value. Undeveloped land is taxed at 20 taels per mow.

LOCATION OF BUSINESS ESTABLISHMENTS

Foreign business offices are located principally in the British and French concessions; warehouses are located principally in these concessions and in the ex-Russian and ex-German concessions. The British, ex-German, and French concessions are also the principal residential sections, with the Italian concession a less expensive but

quite attractive section. The ex-Russian concession is the principal area yet to be developed for business and residence purposes. The Belgian concession is undeveloped so far, except for one industrial plant. The development in that concession is expected to be along factory lines. The Japanese concession is occupied principally by Japanese and Chinese business interests. The ex-Austrian concession is small; with the exception of certain streets devoted to less expensive foreign-style dwellings, the property is largely under Chinese occupation. The ex-Russian, ex-Austrian, Italian, and Belgian concessions lie on one side of the Hai Ho and the Japanese, French, British, and ex-German concessions on the opposite side of the river. Berthing space for steamers has been developed on the side of the river where the British, French, and ex-German concessions lie, but the railroad yards are on the opposite side. The advantages of the ex-Russian concession for future business development especially are well recognized. An international bridge connects the French concession area with the ex-Russian area. The Japanese and Italian concessions lie upstream beyond the bridge, on opposite sides of the river, and are not as convenient for shipping as the areas downstream from the bridge.

LIVING COSTS

The following table indicates ordinary living expenses in Tientsin or Peking:

	Hotel board and room, per month	Rents, small house or apartment, per month	Estimated necessary living expenses per month
Single man.....	\$175-\$300	¹ \$120	\$350
Single woman.....	175- 300	120	350
Married couple.....	300- 500	120	¹ 500
Married couple and 2 children.....	350- 600	² 175- 250	750

¹ Minimum.

² For 6 to 8 rooms.

Prices are in local Chinese currency (Yuan dollars). There are few boarding houses in Tientsin or Peking. Occasionally room and board are obtainable with private families at rates slightly lower than the hotel rates.

In renting houses at Tientsin the tenant must furnish all lighting fixtures, and generally must make all interior repairs and provide for the upkeep of the heating, plumbing, and other installations, besides doing all interior decorating and painting during the term of the lease.

Local transportation is an important item of expense. Hired motor cars cost from \$3 to \$5 (silver) an hour. The average business man's rickshaw hire, if he does not use a motor car, will amount to approximately \$250 local currency per annum.

For persons with families the rent of a four-room cottage at the seashore, with no modern improvements, costs from \$600 to \$800 local currency for the season.

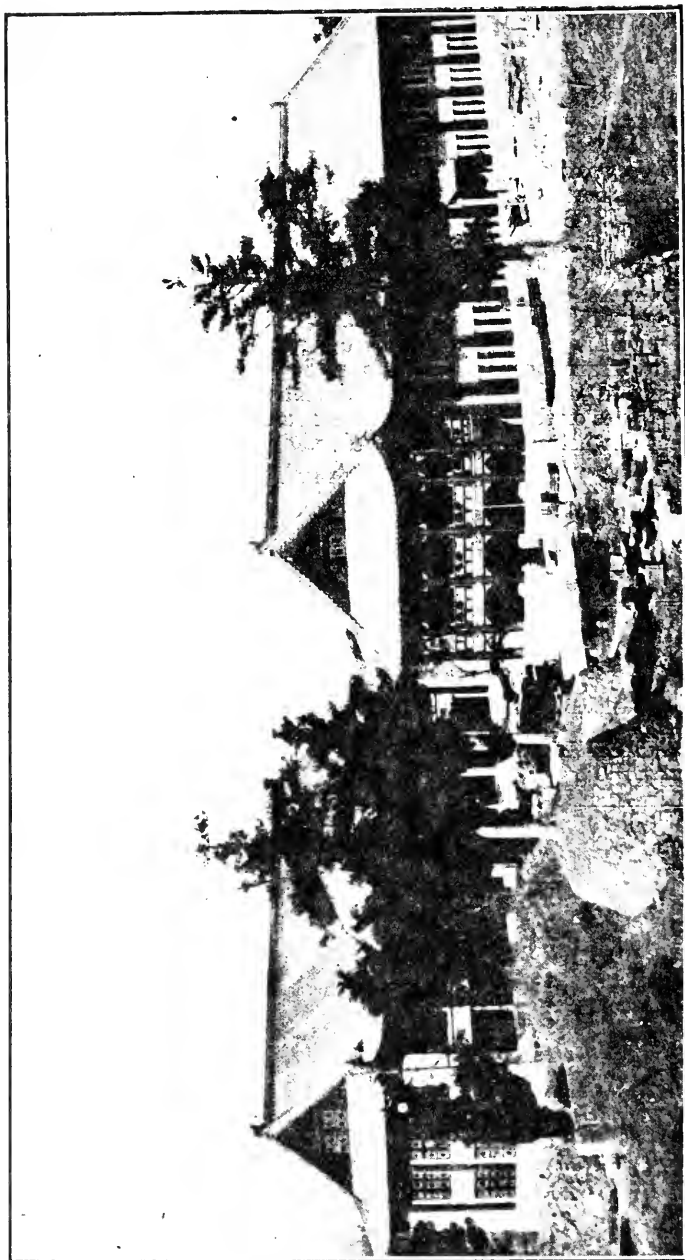


FIG. 21.—Modern-type Chinese buildings, part of plant of Yenching University, an American missionary institution 5 miles north of Peking

EDUCATIONAL FACILITIES

In recent years steps have been taken to provide American educational facilities for American children resident in North China. The Tientsin American School and the Peking American School provide grade-school facilities, and the North China American School at Tunghsien, near Peking, provides educational facilities through the high-school grades.

SIGNIFICANT COMMERCIAL AND ECONOMIC CHANGES

Changes in the character of the trade of the port are apparent from a careful study of the customs statistics. Of particular interest has been the falling off in imports of foreign gray and white cotton piece goods and yarn, replaced by native gray goods and the local production of cotton yarn and cloth. The machinery trade shows a growth corresponding to the industrial development, as does the import of electrical equipment. Exports have more than doubled during the past decade, and the import trade shows an increase of 64 per cent, this increase representing not only a greater per capita consumption of foreign goods but a greater diversification in the character of imports, including goods which may be classed as other than necessities.

AMOY CONSULAR DISTRICT

By Consul Leroy Webber

LOCATION AND AREA

The Amoy consular district comprises approximately 20,000 square miles of the southern portion of Fukien Province, lying between 24° and 25° N. latitude, and between 117° and 120° E. longitude. The latitude of the city of Amoy corresponds with that of Key West, Fla. Amoy is 334 miles from Hongkong, 603 from Shanghai, and 778 from Manila.

South Fukien is one of the most beautiful districts of South China. It is very mountainous, is well wooded, and has many short, shallow streams. The climate along the coast in the eastern part is subtropical, frosts being practically unknown. February to June, inclusive, are the rainy months. The average annual rainfall is 48 to 50 inches. In the hot summer months the temperature rises to 100° F., with a humidity of 88° to 90°. The winter temperature rarely falls below 50° F. The months of November to January, inclusive, comprise the dry season and that is probably the best time to visit Amoy. The district is well protected from the severe typhoons of the summer and autumn by the island of Formosa.

POPULATION

The estimated population is 6,000,000, practically all of which live in towns or villages. The average density of population for the district is approximately 300. Resident foreigners in the district in 1924, according to official statistics, were as follows:

Americans, including 91 Philippine Chinese.....	233
British.....	243
Danish.....	10
Dutch.....	101
French.....	38
Japanese and Formosans.....	6,298
Russians.....	2
Total.....	6,925

Though the majority of the population engage in agricultural pursuits, the district is not self-supporting. Food products, including rice, are heavily imported annually. The purchasing power of the people is small and in consequence the standard of living not high.

CITIES

The most important cities of the district are shown in the following table:

Cities	Estimated population	Euro-peans	Ameri-cans	American firms and organizations
Amoy ¹ -----	260,000	-----	-----	2, with branches or representatives. 15, represented by foreign and Chinese firms. 2 religious missions. 1 religious mission.
Kulangsu ¹ -----	40,000	300	87	
Changchow-----	75,000	5	4	
Chuanchow-----	75,000	4	-----	
Shihma-----	40,000	3	-----	Do.
Tungan-----	40,000	6	5	Do.
Anhai-----	25,000	-----	-----	

¹ Treaty port and foreign concession.

There are British and Japanese concessions, as well as a small nominal American concession on the Amoy Harbor front.

Kulangsu, a small island opposite Amoy, a mile long and one-half mile wide, was made an international settlement by China in 1903. It forms the foreign consular and residential section of the port. It is administered under land regulations and by-laws agreed upon between the powers and China. The administration is vested in a municipal council, consisting of five foreigners (elected annually by the taxpayers) and one Chinese (appointed by the Chinese authorities). The acts of the council are subject to a certain amount of control by the consular body.

The foreign population of the island is placed at 300 and the Chinese at 40,000. In addition there is also a Japanese and Formosan population, estimated at about 800.

EDUCATION

Education continues to progress. The number of public schools and pupils attending them is on an increase. Practically all of the schools now embrace the more practical branches of study in addition to the regular study of Chinese literature and classics. Public schools are generally supported by Government funds and by tuition fees received from the scholars. Both public and private educational institutions draw their staffs largely from those educated in the foreign mission schools or colleges. Throughout south Fukien there are many American and foreign mission schools of various denominations. In Amoy there are a number of private higher-grade schools, chief among which is the Tung Wen Institute. This college was established about 26 years ago and is under the direction of an American superintendent, assisted by two other American instructors and a staff of native teachers. The enrollment is about 300 and the institution is supported by endowment by local Chinese and also by tuition fees.

Probably the biggest advance made along educational lines in Amoy has been the establishment in 1921 of Amoy University. This university, built and conducted along modern lines, has been heavily endowed by the wealthy Chinese of the district. Its faculty consists of graduates of American or European universities, and it has an enrollment of 240 students, although the university can accommodate 2,000. There are 10 large buildings now, and it is expected that within five years about 50 buildings will be completed and fitted, making the Amoy University one of the most modern and finest educational institutions in China.

AGRICULTURE

Fully 60 per cent of the population is engaged in agriculture. Rice is the chief product grown, followed in order of importance by tobacco, sugar, opium poppy, sweet potatoes, and fruits. Two crops of rice are harvested yearly, and the annual production is estimated at approximately 50,000 tons. Most of the production is consumed locally for food and in the manufacture of samshu, a native wine which is exported in considerable quantity. The average annual rice production per acre is estimated at 9,870 pounds.

Tobacco, the second crop in importance, is cured for use both in China and for export to Chinese abroad. South Fukien produces about 10 per cent of China's total tobacco crop, of an approximate value of \$1,500,000 gold.

About 6,000,000 piculs of sugar are produced annually, all of which is consumed locally. There are several small sugar factories having some modern equipment. Sugar production is on a decline through inability to meet foreign competition, the high cost of labor, and transportation difficulties.

Narcissus bulbs form one of the principal exports to the United States. The opium poppy is cultivated on a large scale in the Tungan district. Sweet potatoes are grown throughout the district and form one of the principal native foods. The principal fruits are pomelos (grapefruit), for which Amoy is celebrated; oranges, bananas, peaches, pears, lungngans, and persimmons.

As in the rest of South China, agricultural methods and implements are primitive. The water buffalo is the beast of burden. Hogs, chickens, and ducks are raised on a large scale. There are no sheep or cattle in the district.

Most of the lands used for farming are held by the clans, everything being more or less directed by the head of the clan. Loans and mortgages are made, usually at high rates. Where land is leased or rented payments are made in the form of crops. The first crop is generally considered payment.

Fertilizers are extensively used. Bean cake and sulphate of ammonia comprise the principal types. In 1923, 8,528,000 pounds of sulphate of ammonia and 1,586,169 piculs of bean cake were imported.

FISHERIES

Fish are plentiful the year round, and fishermen numerous and skillful. Nearly all fish characteristic of the China coast, including oysters, shrimps, and prawns, are obtained and consumed locally.

MANUFACTURING

The following list gives the only important manufacturing industries in the district:

Name	Capacity.	Approximate number of employees	Approximate capital in industry ¹	Estimated output	Disposition of production
Amoy Tinning Co.	15,000 tins daily...	120	\$166,000	2,500,000 tins per year.	Local consumption and export to Amoy Chinese in Straits Settlements, Philippines, and East Indies. Local consumption.
China Canning Co.	10,000 tins daily...	99	10,000	1,900,000 tins per year.	
Liok Hong.....	-----	30	50,000	20 tons per day....	

¹ Gold dollars.

The output of the two canning factories includes canned fish, meats, vegetables, salted vegetables and shellfish, fruits in sirup, preserved fruits, soy and soy sauce.

There are several sugar, paper, ice-making, brick, and tile factories scattered throughout the district, but none is of any outstanding importance.

LABOR CONDITIONS

Scarcity of labor has resulted in a comparatively high wage scale for Amoy. The labor wage in local industrial plants averages about 60 cents and 15 cents (Mex.) for male and female labor, respectively, per 8-hour day, with board and lodging. Local coolie wages average \$1 (Mex.) per day, which is high compared with the wage scale for imported coolie labor. Nearly all the available local labor is engaged in regular occupation, such as stevedoring, lightering, and passenger carriage. The majority of the factory employees are female. Most of the construction work is performed by contractors from outside cities, who usually bring their own labor with them.

COOLIE MIGRATION

It is a peculiarity of this district that all the Fukienese who emigrate go to the Straits Settlements, the East Indies, or the Philippines. The establishment of Chinese colonies in these places was started many years ago by the natives of this district. Several conspicuous instances of Chinese having returned to their homes with great wealth accumulated in the above-mentioned countries, together with the insecurity of life in the interior and excessive taxation, induces others to go. At present the volume of this emigration appears to be greater than ever before. It is estimated that an average of 100,000 leave this port annually. The remittances received in Amoy from these emigrants amount to over \$20,000,000 gold per annum and constitute one of the principal sources of wealth of the Province of Fukien.

MINERALS AND MINING

While there are extensive deposits of iron ore and coal in south Fukien, the production of these minerals is negligible, owing to the lack of transportation facilities, roads, or adequate governmental protection of private interests, and to the unattractiveness of Chi-

nese laws to foreign capital. A good grade of anthracite coal is mined in various parts of the Province by Chinese methods and is used solely for consumption in this district.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The district is poorly equipped for inland water transportation. No foreign ocean-going vessel of any kind would find it possible to navigate the south Fukien rivers. The principal carriers both of freight and of passengers are the light-draft native junks and steam launches. Tariffs are determined by the traffic and facilities available at the time. A conservative estimate places the inland freight traffic by junks at an average of about 600 tons per day, with a freight charge on general cargo of approximately 75 cents (Mex.) per ton.

RAILWAYS

The single railway in this district is in the same stage of construction as it was in 1911. It extends inland from the port of Amoy for a distance of about 17 miles, where the lack of a bridge and of available funds to build one prevents further road construction. The road is at present valueless to commerce and will probably remain so until there is a return to normal conditions in China.

ROADS

There are but three roads, of a total length of 47 miles, in south Fukien suitable for motor traffic. Over these roads a motor passenger traffic service is maintained, but freight is not carried. Passenger rates average about 20 cents per mile local currency for first class and 10 cents per mile for third class. There are about 50 motor cars, all American, of light, passenger type, operated in this district. The roads are not well surfaced and require constant repair.

TELEGRAPHS AND CABLES

The Great Northern Telegraph Co. (Danish) operates the cable at Amoy, connecting with North and South China ports as well as overseas. The cable rates are those which obtain in other parts of China. The Chinese Telegraph Administration maintains a land telegraph service, at the usual rates prevailing in China (9 cents Mex. per English word and 5 cents per Chinese word) to points in Fukien Province; to other parts of China 18 cents per English word, and 12 cents per Chinese word.

TELEPHONES

The telephone service between the international settlement of Kulangsu and Amoy is owned and operated by local Chinese, with 500 phones in operation at Amoy and 176 in Kulangsu. The service costs \$6 local currency per month. The two cities are also connected by a submarine cable. Most of the equipment is modern and was recently installed by an American company.

POSTAL FACILITIES

The Chinese Government maintains the postal service. Postage rates per ounce on first-class matter are: From United States, 5 cents gold; from Hongkong, 4 cents (Mex.); from Shanghai, 3 cents (Mex.); from Manila, 10 centavos.

An average of about 30 days is required for American mail to reach Amoy. There are no C. O. D. arrangements between Amoy and the United States, but Amoy is an international money-order office.

SHIPPING AND WAREHOUSING FACILITIES

Forwarding companies in America should book through freight to Amoy via Hongkong, and it would be advantageous for such forwarding companies to arrange with China coast steamship companies having weekly or biweekly services to take delivery at Hongkong for discharge at this port. Goods should never be sent to Hongkong and Shanghai with instruction to notify consignees at coastal ports. The China Navigation Co. (British), Douglas S. S. Co. (British), and the Osaka Shosen Kaisha (Japanese) are the chief handlers of interport transportation. These firms maintain regular coastal steamer connections with Hongkong, Swatow, Foochow, and Shanghai. In addition, there are several other lines having direct steamer connections with the Philippines (Madrigal & Co. of Manila), Singapore (Jardine Ltd., and Butterfield & Swire Ltd., of Hongkong), and Java (Java, China, Japan Lijn, Dutch).

Parcel-post shipments from the United States might be used to advantage in many commodities.

AMOY HARBOR

The Amoy Harbor is one of the largest and best deep-water harbors in the Far East. The outer harbor, which is landlocked, is an hour's run from the main steamship lanes and is frequently sought as a place of refuge for vessels during typhoon weather. The inner harbor lies between islands of Amoy and Kulangsu. The minimum depth of anchorage in the inner harbor at low water is about 30 feet, but steamers drawing up to 34 feet may safely navigate it ordinarily. There is no limit in the outer harbor.

While pilotage is not compulsory, it is advisable that vessels employ a pilot when entering the inner harbor. Current pilotage rates for merchant vessels: Under 1,000 net register tons, \$20, local currency; over 1,000 tons, 2 cents for each additional ton; over 2,000 tons, 1¾ cents for each additional ton. Sailing vessels under 571 net register tons pay \$20 and 3½ cents for each ton over 571 tons; naval vessels, ¾ cent for every displacement ton.

There are no piers or wharves at Amoy. Tying up to the privately owned buoys in the inner harbor is usually a matter of arrangement with the owners, through the harbor master. There are berths for 17 ships, 2 of which will take vessels over 400 feet in length. A dry dock, owned and operated by the Chinese Government, carries limited supplies and can handle ordinary ship repairs.

PORT CHARGES

Customs tonnage dues are charged at the rate of 0.40 haikwan (customs) tael per net registered ton. There are no wharf, light, hospital, harbor, sanitary, or other dues, except in the case of quarantine, when the fees due the port health officer are determined and published by the commissioner of customs, after a joint agreement between the foreign consuls and the Chinese superintendent of customs.

The usual charge made by foreign firms acting as ships' agents is \$50 Spanish and $2\frac{1}{2}$ to 5 per cent on freight discharged or loaded. The matter is generally one for special arrangement.

During 1923, 2,054 vessels, aggregating 3,136,384 tons, entered and cleared the port of Amoy.

CARGO-HANDLING FACILITIES

There are no mechanical facilities for handling cargo. The stevedoring firms employ about 150 lighters, of capacity from 10 to 14 tons each, and handle all the cargo loaded or discharged here. The rate of discharge for general cargo is estimated at 300 to 350 tons per day.

Cargo-discharge rates vary from 24 to 27 cents per measurement ton for stevedorage; and are 5 cents per bag of 225 pounds, $\frac{1}{2}$ cent per bag of 49 pounds, and 21 cents per ton for lighterage in the case of such commodities as flour, rice, and coal. The average coolie hire is about 80 local cents per 8-hour day per man.

Merchandise for this district must be more than ordinarily well packed. In order to be easily handled by coolie bearers it should not exceed 60 pounds in weight per case, and goods liable to deterioration on account of climatic conditions should be packed in tin-lined cases.

STORAGE FACILITIES

There are no public warehouses, but there are scattered throughout the port about 25 small private warehouses which are unequipped with modern or cold-storage facilities. These have a total cargo accommodation of about 60,000 tons. Merchandise at Amoy is always accepted ex ship, and there is therefore not the usual free storage period. The usual rate on small packages (ordinary cargo) is 1 local cent per day per package and 2 to 5 cents per day on larger packages. No fee is charged on goods stored in customs godowns but cleared off in 24 hours. After that period fees are charged up to 20 days, for a longer period than which goods can not be stored.

PUBLIC WORKS

ELECTRIC-LIGHT PLANTS

The Amoy Electric Light and Power Co., capitalized at \$300,000 in local currency, is controlled by local Chinese and supplies Amoy with current. The plant equipment consists of four turbogenerator sets, with a combined capacity of 1,200 kilowatts, power furnished by water boilers of tube type. The total number of lights in use is

100,000 in 40-watt units. The plant's kilowatt lighting load at present is 600 and the power load 100. Lighting service is furnished at 33 cents per meter hour. The equipment is of American, British, and German manufacture.

The international settlement on the island of Kulangsu has an electric-light plant at present operated by a Shanghai electric firm, but plans are on foot to have a British firm of Hongkong erect and operate a modern lighting system.

Changchow, 33 miles inland, is supplied with a small plant equipped partly with British and partly with American materials. There are also two other small plants in the district, in one of which the machinery is of American and British manufacture, while in the other it is of Japanese manufacture. Other than the proposed new installation at Kulangsu, there is little immediate prospect of further electric power-plant extension in the district.

WATERWORKS

Surface wells are the only source of water supply in this district at present. The Amoy Waterworks Co. (Ltd.), however, has awarded a contract to a German-Chinese firm for the installation of a modern system of water supply in the city of Amoy. The contract calls for the construction of a gravity system of supply, with a capacity of 500,000 gallons daily, a storage reservoir of 270,000,000 gallons capacity, 3 filter beds of a total daily capacity of 600,000 gallons, with 2 beds operating at one time, the total cost to be \$920,000 local currency. Work started in October, 1924. The waterworks company also contemplates the expenditure of \$280,000 local currency for reforestation of the lands, construction of buildings, roads, jetties, and other improvements.

IMPORT AND EXPORT TRADE

The total trade of the port of Amoy in 1923 amounted to \$24,416,380 United States currency; the net foreign imports were valued at \$11,096,939, and imports of Chinese goods at \$9,331,192. Exports to foreign ports were valued at \$2,728,463 United States currency; exports to Chinese ports at \$1,259,786.

Amoy ranked nineteenth in 1923 among 40 Chinese ports listed in the Chinese customs returns. The balance of trade was heavily against Amoy, but this adverse balance is considerably offset each year by the large volume of remittances received from Amoy Chinese abroad.

In 1923 Hongkong supplied approximately 61 per cent of the foreign imports, British India 14 per cent, Japan 9 (largely through Formosa), and the United States 6 per cent (principally petroleum products). Exports in 1923 were distributed as follows: 47 per cent to Singapore, 24 per cent to the Dutch East Indies, 8 per cent to Japan and Formosa, 8 per cent to the Philippines, and 9 per cent to Hongkong.

The table which follows shows the foreign trade of Amoy for 1913 and 1923, respectively:

	Gross imports of foreign goods		Exports (including re-exports of native goods)		Total trade	
	1913	1923	1913	1923	1913	1923
British India.....	\$365,468	\$361,133	\$103,795	\$96,991	\$469,263	\$1,458,124
Dutch East Indies.....	243,392	1,361,526	411,156	705,532	654,548	1,067,058
France.....	590	92	10		600	92
French Indo-China.....	11,087	19,875	959	1,662	12,046	21,537
Great Britain.....	30,034	7,237	618		30,652	7,237
Hongkong.....	5,729,380	6,031,723	238,701	271,885	5,968,081	6,303,608
Japan (including Formosa).....	492,455	931,785	191,841	233,687	684,296	1,165,472
Philippines.....	28,515	124,342	95,612	243,577	124,127	367,919
Singapore, Straits Settlements.....	599,715	484,399	795,711	1,384,228	1,395,426	1,868,627
United States and Hawaii.....	455,055	603,316	5,075		460,130	603,316
Other countries.....	2,124	25,540	3,298	3,415	5,422	28,955
Total.....	7,957,815	9,950,968	1,846,776	2,940,977	9,804,591	12,891,945

NOTE.—Above figures are in United States currency, converted from haikwan taels (the official customs unit) at the following values: 1913, \$0.729; 1923, \$0.8231.

EXPORTS

The district produces little for export, and the export trade represents in large measure shipments by Chinese merchants of native foodstuffs and other products intended especially for consumption in other near-by markets and by colonies of Amoy Chinese in foreign countries. Approximately 70 per cent of the total exports go to foreign countries, including Hongkong. The remainder is shipped chiefly to other ports of South China. There are no direct exports from Amoy to the United States. About 1,200 tons of narcissus bulbs exported annually to the American market via Hongkong constitute Amoy's sole export to the United States. The volume of exports from Amoy to the Philippines is steadily increasing. During 1923 the declared exports amounted to \$313,648 gold, as compared with \$235,719 in 1922 and \$54,558 in 1913.

The following table shows the principal articles exported from Amoy during 1913 and 1923:

Articles	1913		1923	
	Quantity	Value	Quantity	Value
Bags.....number.....	408,636	\$13,513	404,544	\$33,435
Bamboo and bamboo ware.....		33,926		28,705
Beans.....bushels.....	300	275	910	4,780
Cordage.....tons.....	14	5,360	98	21,500
Fish and fishery products.....	284	26,447	140	34,360
Fruits.....do.....	2,744	148,258	920	69,825
Joss sticks.....		14,937		15,135
Umbrellas (paper).....number.....		682	20,360	4,500
Mats.....do.....	16,200		1,420	520
Medicines.....		16,833		45,610
Paper.....tons.....	2,403	515,661	2,090	782,767
Plants and shrubs.....		739		40,618
Tobacco.....tons.....	2,209	469,241	1,150	591,108
Samshu (medicated).....	215	14,838	636	144,000
Soy.....do.....			172	26,650
Stones, marbles, granites, etc.....				25,495
Tea.....tons.....	446	120,403	497	270,542
Turnips, dried and salted.....			18	664
Vegetables.....do.....	2,385	87,050	410	15,944
Vermicelli and macaroni.....	1,665	85,683	1,356	212,446
All other.....		961,051		1,619,845
Total.....		2,514,977		3,988,249

NOTE.—Above figures are in United States currency, converted from haikwan taels (the official customs unit) at the following values: 1913, \$0.729; 1923, \$0.8231.

IMPORTS

Import statistics for the port of Amoy indicate the peculiar conditions due to the large yearly migration of Amoy Chinese. Import items include practically all the necessities of daily life, and so emphasize the lack of industrial enterprise. Principal items imported from foreign countries for 1913 and 1923 were as follows:

Articles	1913		1923	
	Quantity	Value	Quantity	Value
Cotton goods.....		\$1,316,102		\$1,107,550
Woolen goods.....		58,018		158,330
Woolen and cotton goods.....		9,886		91,492
Iron and steel manufactures.....		48,610		63,897
Quicksilver..... tons.....	11	12,844	15	18,350
Tin slabs..... do.....	319	160,282	164	89,950
Tin plates..... do.....	376	28,069	408	72,800
Rice and paddy..... do.....	28,665	942,251	42,649	2,008,427
Cigarettes..... thousands.....	27,156	52,079	13,565	63,856
Clothing, hats, boots, etc.....		76,325		195,360
Coal..... tons.....	12,562	62,617	13,175	57,152
Dyes and dyestuffs.....		140,442		171,960
Electrical materials and fittings.....		27,083		28,085
Enameled ware.....		14,301		25,295
Fish and fishery products..... tons.....	6,175	614,376	3,885	670,166
Flour..... barrels.....	173,818	670,424	190,700	1,061,164
Ginseng..... pounds.....	22,600	92,361	23,057	118,270
Hosiery..... dozen pairs.....	15,941	9,825	68,985	38,935
Matches..... gross.....	899,360	182,442	519,459	192,218
Milk, condensed..... dozen tins.....	29,367	37,944	35,452	76,892
Oil:				
Kerosene..... gallons.....	4,997,584	625,478	2,218,453	373,013
Lubricating..... do.....	28,699	5,994	40,965	7,740
Sugar, white..... tons.....	9,785	637,742	7,478	646,519
Umbrellas, foreign..... number.....	33,258	14,827	61,838	31,821
All other.....		2,016,235		3,727,697
Total.....		7,856,587		11,096,989

NOTE.—Above figures are in United States currency, converted from haikwan taels (the official customs unit) at the following values: 1913, \$0.729, 1923, \$0.8231.

The following is a list of the principal foreign goods imported into Amoy, showing country of origin and place of purchase:

Articles	Country of origin	Place of actual purchase
Cotton goods.....	England and Japan.....	Hongkong and Japan.
Cotton blankets.....	do.....	Hongkong and Kobe.
Cotton thread.....	do.....	Do.
Cotton yarn.....	India and Japan.....	Hongkong and Japan.
Handkerchiefs.....	England.....	Hongkong and Singapore.
Woolen goods.....	England and Australia.....	Hongkong.
Woolen blankets.....	England and Japan.....	Hongkong and Kobe.
Woolen and cotton goods.....	do.....	Hongkong and Japan.
Iron and steel manufactures.....	Great Britain, Japan and United States.....	Hongkong and Kobe.
Quicksilver.....	Great Britain.....	Shanghai and Hongkong.
Tin slabs.....	Singapore and Yunnanfu.....	Hongkong.
Tin plates.....	United States and Great Britain.....	Do.
Rice and paddy.....	Indo-China, Siam, and India.....	Hongkong, Saigon, and Singapore.
Cigarettes.....	Shanghai and Great Britain.....	Shanghai.
Clothing.....	England, Japan, and United States.....	Hongkong.
Hats.....	Italy, Japan, England, and United States.....	Hongkong, Kobe, and Manila.
Boots.....	United States and Philippines.....	United States and Manila.
Coal.....	Japan.....	Japan.
Aniline dye.....	Germany.....	Hongkong.
Electrical materials and fittings.....	United States, England, and Japan.....	Amoy, Shanghai, and Hongkong.

Articles	Country or origin	Place of actual purchase
Enamelled ware.....	United States.....	Manila, New York, and Seattle.
Fish and fishery products.....	Japan and United States.....	Kobe, Seattle, and Hongkong.
Flour.....	United States.....	United States and Hongkong.
Ginseng.....	United States and Japan.....	Hongkong.
Hosiery.....	Japan, United States, and Great Britain.....	Kobe and Hongkong.
Matches.....	Japan.....	Kobe.
Milk, condensed.....	United States and Switzerland.....	Hongkong.
Oil, kerosene.....	United States and East Indies.....	United States and Java.
Oil, lubricating.....	United States.....	Hongkong.
Sugar, white.....	Java and Hongkong.....	Direct and through Hongkong.
Umbrellas.....	Japan, France, and Hongkong.....	Kobe and Hongkong.
Sulphate of ammonia.....	England and United States.....	Hongkong.
Machinery.....	Great Britain.....	Do.
Paints.....	do.....	Do.

Of the foreign goods imported there has been, on the whole, a steady gain in practically all items. This is especially marked in the items of rice, hosiery, flour, canned milk, fish and fishery products, and oils. American goods are well represented in these latter items—particularly in the flour, milk, and oil trade, in which they predominate.

As Amoy draws most of its foreign supplies from Hongkong, the port of transshipment of merchandise from all parts of the world, it is difficult to state what percentage of the various imports originated in the several countries, Amoy having practically no direct import trade, with either the United States or Europe. However, it is estimated that the United States supplies about 60 per cent of the oil products imported, 64 per cent of the canned milk, 80 per cent of the flour, most of the tin plate, and a fair percentage of the ginseng, preserved fish, sewing machines, and iron and steel manufactures. Textiles and clothing are imported from Japan and Great Britain, but both of these countries are gradually losing ground with these products, owing to the rising competition of native-made goods.

Rice is imported chiefly from Indo-China, Siam, and British India; sugar from Java and Singapore; cigarettes from Chinese production in other districts and from Great Britain. Great Britain supplies the largest share of machinery, paints, and iron and steel imports.

The outstanding Chinese products imported are yarns, shirtings, hosiery, candles, cement, paper matches, clothing, bean cake, leaf tobacco, vegetables, and fish. Owing to their cheapness and their proximity to the local market, these products of native manufacture have little fear of foreign competition. Imports of native goods into Amoy totaled \$9,331,192 gold in 1923, as compared with \$4,686,987 for 1913.

Amoy and its hinterland can absorb but a limited amount of foreign goods, and there is little apparent likelihood of material increases in the near future. Except in such lines as oil, flour, and salted fish, direct trade with the United States is not very feasible. Probably the wisest course for the American manufacturer interested in this market is to place the sale of his goods in the hands of an American house well established in the large distributing centers of China.

In actual direct trade American firms should always endeavor to quote c. i. f. Amoy, via Hongkong or Shanghai, or, when that is impossible, c. i. f. Hongkong or Shanghai. Local importers take little interest in direct purchases from the United States unless they are able to base retail prices on c. i. f. quotations.

MONEY, BANKS, AND CREDIT

BANKS

The American-Oriental Bank of Fukien (American), the Hongkong & Shanghai Banking Corporation (British), the Bank of Taiwan (Japanese), Nederlandsch Indische Handelsbank (Dutch), and the Bank of China (Chinese) maintain branches in Amoy. There are in addition numerous Chinese banks handling remittances from the Philippines, Straits Settlements, etc., in addition to local native banking business. Credit ratings on foreign and Chinese firms can be had only through the banks.

LOCAL CURRENCY

The prevailing currency used in the port is the Amoy dollar. Bills of exchange and interbank balances, however, are settled in Yuan dollars, in Japanese yen, and in Singapore, Saigon, and Mexican dollars. Probably 90 per cent of the silver dollars in circulation are Yuan dollars. Exchange between native and foreign banks is settled by weight rather than count, owing to the prevalence of the "chop," or mutilated dollar. The Bank of China note is the principal paper currency in circulation.

CREDITS

Most export credits are effected through letter of credit, the popular form being the irrevocable L/C. As Amoy is not a large exporting center, the demand for export credits is relatively small.

Import credits are opened through ordinary bills for collection, authorities to purchase, irrevocable letters of credit, and irrevocable confirmed letters of credit. The "authority to purchase" is popular with some of the local firms who are well known to foreign firms through previous dealings. The irrevocable letter of credit is the most preferred form for import credits and is encouraged whenever possible. A confirmed irrevocable letter of credit is very seldom used except in the case of highly specialized imports, or in special cases.

MERCHANDISING METHODS

While the general custom is to purchase foreign goods through importing houses at Hongkong, a limited volume of foreign imports is bought through Shanghai, Manila, and Japan. The business of the port is in the hands of a comparatively few firms. The foreign firms in Amoy take care of most of the import trade and usually act as local representatives of Hongkong and Shanghai importers. Japanese firms deal chiefly in Japanese goods, while Chinese firms deal with both foreign and native Hongkong houses and with Chinese

abroad. The number of foreign lines, particularly American and British, handled by Chinese is increasing. On account of its proximity to Hongkong, the principal distributing center for South China, and the excellent transportation facilities between that great port and Amoy, foreign manufacturers interested in this market usually locate their agencies at Hongkong.

American firms, however, should be careful when appointing Hongkong agents not to make their sales rights so iron-bound that an Amoy firm, if it chooses, may not purchase direct from the American manufacturer. Caution should be exercised also not to place agencies with foreign houses already handling competitive lines, as often in such circumstances agencies are taken merely to protect lines already on the market, and with no design to push the American product.

Import business is handled both by direct purchase and upon commission basis. In the latter case local agents generally take $2\frac{1}{2}$ per cent commission. In reexporting from Amoy to inland ports local firms assume no responsibility for delivery and none as to fluctuations in exchange; nor is there insurance or other protection against piracy and pilferage. It is left to the purchaser to stand all losses. Ordinarily business between Amoy and upcountry merchants is conducted on a cash basis, or a credit of 15 to 30 days. In some cases, payments are made by installments which fall due on the various Chinese festival days.

ADVERTISING

The best means of advertising in this district are probably the poster, and the free distribution of such attractive specialties as mirrors, fans, calendars, and similar articles. Advertisement of foreign goods in the Chinese papers of Amoy has not yet proved of value. The six Chinese newspapers have a combined circulation of approximately 5,800, and the average daily rate is 10 cents (Mex.) per line, with discounts for more extended space and time. For advertisements running to one year the average rate is about \$100 (Mex.) per month for a full page.

The Hongkong and Shanghai papers in the English language are read by all foreigners as well as by a large percentage of the foreign-educated Chinese. These papers form a fairly good advertising medium.

TRADE ORGANIZATIONS

The Amoy General Chamber of Commerce, including all non-Chinese nationalities, protects interests of the foreign mercantile community, and in Amoy, Changchow, and Chuanchow there are Chinese chambers of commerce. These, with the various guilds, exercise considerable influence on commercial interests in the district. The guilds of Amoy include one engaged in the North China trade, another in the trade with Hongkong and the East Indies, and others for the Formosan trade, silk-goods trade, drug trade, paper trade, and other special lines. There are no foreign attorneys in Amoy, and legal matters, when necessary, should be placed in the hands of American attorneys located in Shanghai.

AMERICAN INTERESTS

Three American firms have branches or representatives in Amoy. In addition, there are about 15 other American firms represented by foreign and Chinese importing houses. The lines represented include condensed, evaporated, and dried milk; flour; machinery; marine engines; tires and automobiles; sewing machines; raisins; canned food products. American steamship lines are also represented. The extensive missionary interests in this district maintain hospitals, schools, and churches throughout the whole of south Fukien.

LIVING COSTS

A small six-room dwelling suitable for a foreigner rents for approximately \$125 gold per month. Servant wages vary from \$12 (local currency) for a coolie to \$25 for cook or number-one boy. The average outlay per month for servants for two may be conservatively estimated at \$80. Expenses for food, lights, etc., should be placed at \$100 per head. Office space, which can generally be obtained with the foreign firms located on the harbor front in Amoy, is at a premium, and varies from \$100 upwards. Ordinary desk space, including small room, rents for \$50 per month. The above amounts are in local currency.

Clothing, foodstuffs, and other necessities of life retail for about 5. to 15 per cent above the prices prevailing at Hongkong.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

The district as a whole has changed very little during the past 10 years. Progress can be reported in the increased consumption of foreign goods, owing to the return of a large number of foreign-educated Chinese from abroad and to the education of the natives to the use and advantages of foreign merchandise. American manufacturers and exporters of oil products, of flour, milk, and other food products, of hardware, electrical specialties, and motor vehicles, have all benefited by this demand for foreign goods.

Chinese factory products, however, have established themselves as an important factor in competition with foreign goods.

ANTUNG CONSULAR DISTRICT

By Consul William R. Langdon

LOCATION AND AREA

Antung is the gateway between Chosen (Korea) and Manchuria, and the Antung consular district comprises 18,000 square miles of the southeastern portion of Shengking (Fengtien or Mukden) Province. It corresponds in latitude with Oregon, Iowa, and Massachusetts.

Antung is reputed to have one of the best climates in North China—dry, cold, and sunny in winter, and hot but not humid in the summer. The average annual rainfall is 35 inches, not including 11 inches of melted snow. The average minimum temperature is -8° F.; average maximum temperature, 89° F. The rainy season is from July 10 to August 20; the dry season September to April.

POPULATION

The official estimate in 1916 gave the population as 1,652,000. It is estimated that about 80,000 Chinese from Shantung and other Provinces arrive in the district each year and approximately 54,000 leave. Estimating the net annual immigration at 26,000 for the past eight years, and the natural increase of population over the same period at 40,000, the present population may be given as about 2,000,000. The average density for the whole consular district is 106 per square mile.

CITIES

The leading cities of the district are shown in the following table:

City	Population, estimated	Europeans	Americans	American business firms
Antung.....	¹ 140,000	49	5	2
Linkiang.....	25,000	—	—	—
Fengwangcheng.....	12,000	3	—	—
Changpaifu.....	12,000	—	—	—
Takushan.....	10,000	4	—	—
Suiyuen.....	10,000	6	2	—
Chwangho.....	8,000	—	—	—
Kwantien.....	8,000	2	—	—
Tatungkow.....	3,000	—	—	—

¹ Includes 10,500 Japanese and Koreans.

Antung is the distributing center of imports for Yalu River settlements, the export entrepôt, and the manufacturing center of the region. There is an extensive and well-kept Japanese settlement, comprising about 5 square miles in the level portion of the city, administered by the South Manchuria Railway Co. Europeans live

both in the Japanese settlement and in the native city, which is sanitary and well administered. The Japanese and Koreans living across the Yalu River in the Korean city of Shingishu and neighboring towns and villages are an important factor in the retail trade of the port.

Linkiang is a native city, and the central market of Yalu River timber. Changpaifu is also a timber market.

Tatungkow is a treaty port and has a Chinese maritime custom-house. It was an important timber export center in the early days of the industry, but with the silting up of the approach to the port it is now a moribund Chinese village.

American and European kerosene, sugar, and cigarette companies have native agents and keep consignment stocks in all the other towns named. Foreign fire-insurance companies are also represented by native firms.

AGRICULTURE

In the following table are given the principal agricultural products in the order of their importance:

Products	Planting season	Harvesting season	Average production per acre	Estimated annual production	Disposition
Beans ¹ -----	Early May-----	Middle of September.	<i>Busbels</i> 49	<i>Busbels</i> 8,000,000	90 per cent brought to Antung for crushing and export. 4,000,000 bushels exported annually. 500,000 bushels exported annually, balance consumed locally. 250,000 bushels exported annually, balance consumed locally.
Millet-----	do-----	do-----	37	5,000,000	
Corn-----	End of April-----	End of September.	61	12,000,000	
Kaoliang or sorghum.	Early May-----	do-----	42	10,000,000	Consumed locally.
Rice-----	Middle of May--	do-----	56	680,200	
Tobacco-----	Middle of April.	August-September	<i>Pounds</i> ² 600	-----	Do.

¹ For details of the bean-crushing industry see under "Manufacturing and industrial development."

² On farms of South Manchuria Ry.

Millet is of growing importance and closely related to Japan's food problem. Four million bushels, on an average, are exported annually (in 1923 it was 6,000,000) to Chosen, where millet is consumed as a substitute for rice, thus increasing the surplus of Korean-grown rice available for export to Japan.

Corn is the staple diet of the Shangtung immigrants and their descendants, who comprise about a third of the population of the consular district.

Kaoliang is the staple diet of the Manchurian Chinese. It is also the principal fodder of draft animals in the region.

Rice cultivation is largely in the hands of Korean settlers. The quantity raised is still relatively insignificant, but is increasing rapidly every year as new areas are being irrigated.

Tobacco.—Farmers usually raise enough tobacco to meet their own requirements. The leaf is very coarse and is not exported. The South Manchuria Railway Co. is conducting experiments in tobacco

cultivation near Fenghwangcheng. It distributes American yellow tobacco seed to farmers, supervises its cultivation, and buys, prepares, and sells the crop in Mukden. The farms under the company's supervision comprise 372 acres, and 223,560 pounds of leaf are produced by them each year.

SERICULTURE

This consular district is the largest producing area of wild silk or tussah cocoons in the world. The climate, as well as the species of scrub oak that covers the hillsides, is ideally suited to tussah silkworm culture. The annual crop is estimated at between four and four and one-half billion cocoons. Most of the cocoons raised in the district are brought to Antung, where they are reeled or shipped to Chefoo for reeling. The proportion of Manchurian cocoons coming to Antung to be reeled is increasing each year.

FORESTRY AND LUMBERING

Lumbering is the oldest industry of the Antung district, and references to rafting operations on the Yalu River are found in the earliest European works on travel in this region. An official Sino-Japanese corporation, created by international treaty in 1908 and called the Yalu Timber Co., controls the industry to-day by virtue of certain privileges. Besides engaging in felling operations on its own account, the company has the first option on all Yalu timber offered for sale in Antung. It also collects an impost, or royalty, for the two Governments on all timber which it does not purchase. The impost at present is 9 per cent ad valorem (temporarily reduced by 22 per cent to relieve the depression prevailing in the local industry). The average annual production of timber for the years 1914-1923 has been 18,665,000 cubic feet, mostly of softwood varieties, notably Korean five-leaved red pine, white pine, and larch. Among the hardwoods produced in commercial quantities are oak, ash, walnut, elm, and chestnut.

MINERALS AND MINING

While the region is rich in minerals, none are worked on a commercial scale. In a pamphlet entitled "Useful Minerals and their Distribution in South Manchuria," by Dr. Bunkichi Toheida, of the Geological Institute of the South Manchuria Railway Co., are listed the more important deposits known to exist in the Eastern Marches of Manchuria, as the consular district is known, with notes concerning concessionnaires, mining operations, etc., of each. The following deposits deserve mention:

Iron.—Miaoerhkou, 5 miles east of Nanfen on Antung-Mukden line. Owned by Penhsihu Colliery & Mining Co. (Okura & Co.); 200 tons of rich ore are produced daily.

Gold.—The Long White Mountain in the consular district, from which rise the Yalu, Sungari, and Tumen Rivers, was the Klondike of China in the latter part of the Manchu dynasty. European travelers and explorers continually came upon lone individuals, outlaws for the most part, washing gold in out-of-the-way creeks. These operations appear to have ceased with the economic develop-

ment of the region and with the greater profit to be had from felling and rafting timber.

At Wangerlshan, on upper Yalu, and Tamiakou, 5 miles south of Tunghua, Bush Bros. (British firm) were granted concession to work these deposits by the Viceroy in Mukden in the Imperial régime, but the concession was never ratified by Peking and operations never undertaken.

At Paomachuan (38 miles south of Tunghua), Gold and alluvial deposits of passable quality occur in fair quantities. Huachang Kungssu, Chinese firm, is the concessionnaire.

Copper.—Pyrites are found along the Yalu River at Tungyuanling, 2 miles below Antung. About half a million pounds of copper were produced annually while the deposits were mined. Operations have been suspended since 1922.

At Santaokou, 27 miles northeast of Kuantien, copper pyrites of fine quality is found in small quantities. There is no concessionnaire, and no operations are in progress at present.

Lead.—Fine quality lead in small quantities is found at Laojenkou and Erhpengtientzu, both 12 miles southeast of Huaijen. There are no concessionnaires.

This mineral occurs also at Tiennankou and Chingchentzu, 25 and 27 miles west of Tunfyuanpu on the Antung-Mukden line. The concessionnaire is Japanese. Mining operations are in progress.

Coal.—There are numerous deposits everywhere. The output is usually sold locally.

Asbestos.—This mineral occurs at Tahuangkou in Kuantien prefecture, and is mined in small quantities. The product is mostly poor grade, brittle, and nonfibrous.

Graphite.—Deposits occur at Shihchutzu, on Yalu River 30 miles above Antung.

Exports in 1922 of minerals produced in the neighborhood of Antung were as follows: Graphite, 53,466 pounds; asbestos, 1,066 pounds.

TRAPPING AND FUR TRADE

While few valuable fur-bearing animals are trapped in the Antung district, considerable quantities of red fox, raccoon, and badger skins are brought to Antung from the interior. Large stocks of otter skins of North Manchurian and Chosen origin are also to be found in the Antung fur market at all times. Dogskins are very plentiful in the market, dog raising being a profitable side line of farmers in the neighboring districts of Chosen. Deerskins of local and Chosen origin are also common.

Although Antung is essentially a retail fur market, fur skins have been exported in the following quantities in recent years: 1920, 249,073 pieces; 1921, 269,466; 1922, 136,629.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The following are the principal manufacturing industries of this consular district, showing the equipment, number of employees, capital, estimated output, and disposition of product:

Tussah-silk reeling.—Thirty-seven steam filatures with 22,000 reels; 10,550 employees; approximate capital, \$800,000; estimated output,

17,291 boxes, of 133 pounds (in 1923); 90 per cent exported to Japan and 10 per cent to Shanghai.

There are also 30 hand filatures with 2,400 reels; 1,550 employees; approximate capital, \$32,000; estimated output, 2,638 boxes, of 133 pounds.

Bean milling.—Twenty-five mills with hydraulic presses; 1,100 employees; approximate capital, \$1,500,000; estimated output, 5,000,000 pieces of bean cake, 34,000,000 pounds of oil; exported to Chosen, Japan, and Swatow.

Sawmilling.—Twenty-two power mills; 800 employees; approximate capital, \$3,290,000; estimated output per day, when operating at full capacity, 600,000 square feet; exported to Chosen and Japan, part of output consumed locally.

The total equipment of these 22 mills is as follows: Circular saws, 89; band saws, 22; gang saws, 53; automatic saw sharpeners, 11; circular box-making saws, 82.

Yarn making (waste tussah gassed yarn).—One mill; 1,900 employees; approximate capital, \$1,115,000; estimated output, 400,000 pounds of yarn annually; exported to Japan and Europe.

Match material.—One mill; 793 employees; approximate capital, \$800,000; estimated output per day, 5,000 shipping cases, 5,000,000 match boxes, 200 bags of match sticks; exported to Tientsin.

Paper pulp.—One mill; operation suspended since 1922; approximate capital, \$2,000,000; estimated output, 15,000 tons per year; originally intended for Japanese market.

Blasting and sporting powder.—One mill; approximate capital, \$1,000,000; for Manchurian mines and sportmen.

Pongee weaving.—One mill of 30 looms; 60 employees; product exported.

The tussah-reeling, bean-milling, match-making, and pongee-weaving industries are in the hands of Chinese. The sawmill, yarn, explosives, and pulp factories are all owned and managed by Japanese. The pulp mill was shut down in 1922, and operations have not been resumed since, owing to the inability to compete in the Japanese market.

LABOR CONDITIONS

The following table shows the conditions existing in the four leading industries of the district:

Industries	Wages (monthly)		Board and lodging	Hours of work	Efficiency of labor
	Male	Female			
Silk reeling.....	\$4.50	.....	Food and lodging furnished.	9	Mediocre.
Bean milling.....	5.50	.....	do.....	12	Good.
Sawmilling.....	10.00	.....	None.....	9	Do.
Rice cleaning.....	.....	\$9.00	do.....	9	Mediocre.

The figures in the table are the approximate equivalents, in United States currency, of the different currencies paid for wages. Silk-reeling boys get small-silver coin \$9.60 (equal to \$8 Mex.) per month. Bean-press hands get small-silver coin \$12 (\$10 Mex.)

per month. Experienced sawmill operatives—that is, those feeding and handling the saws—get \$1, Mukden paper currency, per day. Rice-cleaning girls get 60 to 70 sen, Japanese currency, per day.

The hours of labor given are also approximate. In the silk-reeling industry, for instance, each boy is given 1,000 cocoons to unwind at the beginning of the day. After he has reeled these cocoons his time is his own. Skillful reelers require 7 hours, while new hands take 11 hours for the same job. Food and wage considerations bring the total hire of a silk-reeling operative up to small-silver coin \$20 per month (between \$9 and \$9.50 U. S. currency). The food is of the coarsest, usually boiled corn meal or corn bread, with cabbage, turnips, or similar cheap vegetables. Sawmill hands get about the same kind of food. Meat and wheat-flour cakes are served to them twice a month. The lodging accommodations are of the simplest kind. In the silk mills the operative unrolls his bedding and sleeps beside his reel. The sleeping quarters in the bean mills are slightly better.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The port of Antung is closed by ice from the middle of November until the end of March. Shipping at present is confined to Chinese coast and Japan Sea steamers of not more than 2,000 tons. It is roughly divided into three classes: Timber to Tientsin and Tsingtao; bean cake to Swatow and to Korean and Japanese ports; and general cargo from and to Shanghai and Japanese ports. All cargo is discharged into lighters or junks at Santaolangtou, the port of Antung, or at the Tatungkow or intermediate anchorage, and hauled from there to the steamship companies' warehouses in Antung.

Pilots are necessary at all times, as old anchorages are continually silting up and new ones being formed. The shipping of the port in 1923 was as follows:

Nationality	Ocean steamers		Sailing vessels	
	Number	Tonnage	Number	Tonnage
British.....	124	146,456	.....	.....
Japanese.....	298	225,618	374	10,096
Chinese.....	214	149,746	.....	.....
Total.....	636	521,820	374	10,096

American goods should be shipped direct either to Dairen or to Shanghai to avoid the delay and expense of a second transshipment, which is necessary if they are landed at Kobe, Hongkong, etc. Steamship services to Dairen and Shanghai are regular and frequent, and the Antung consignee receives his goods promptly from those ports. Care should be exercised to insure the arrival of shipments before the closing of the port if possible. If shipments are made during the closed season, they should be direct to Dairen, from where they may be hauled to Antung by rail without further transshipment,

RAILWAYS

The only railway line operating in the district is the Antung-Mukden section of the South Manchuria Railway. The distance from Antung to Suchiatun (main line South Manchuria Railway) is 161 miles. Passenger fares, first class, 7 sen per mile; second class, $4\frac{1}{2}$ sen; third class, $2\frac{1}{2}$ sen (1 sen equals $\frac{1}{2}$ cent gold).

This line is connected with the main Chosen (Korean) line of the South Manchuria Railway and is the principal highway of Japanese exports to Manchurian trade marts. It also provides Chosen with coal from the Fushun and Penhsihu collieries in the Mukden consular district. All goods entering or leaving Antung via rail from or to Chosen enjoy a reduction of one-third of the import or export duty.

No railroads are under construction at present, nor is there any publicly known outstanding concession for railroad construction in the consular district. A light railroad from Antung to some deep anchorage on the coast free from ice throughout the winter would in all likelihood be a very useful and profitable enterprise. The South Manchuria Railway Co. has had under contemplation for many years the construction of a spur from the main Chosen line to Tasurugi (Tashito), a deep, ice-free anchorage on the Chosen coast of the Yalu Delta. Such a branch would not only make Antung accessible by steamer in the winter but it would also permit ocean steamships of deeper draft to discharge cargo for Antung in the open season. At present the following ports are connected by rail with Antung: Dairen in the Kwantung leased territory and Fusan, Chemulpo, and Chinnampo in Chosen.

ROADS

In the city of Antung all streets, both in the Japanese settlement and in the native city, are adaptable to motor transportation; it is estimated that there are only seven motor cars in operation. During the winter months there are five motor busses that run between Antung and Takushan, a distance of 60 miles. The passenger fare is \$3. Such other so-called roads as exist in the consular district can be negotiated only by heavy Manchurian carts pulled by from four to seven animals. There are no definite plans for road construction at present.

TELEGRAPHS

Chinese Telegraph Administration.—This service maintains contacts with all telegraph offices in China and foreign countries and with important towns in the interior of the district. There are 29 stations in the Antung consular district. The rate to Shanghai is 18 cents (Mex.); to New York, \$2. (Mex.).

Imperial Japanese Department of Communications.—This bureau has contacts with points in the South Manchuria Railway zone, Kwantung leased territory, Japanese Empire, foreign countries, and China via Japan. Offices are maintained at all railroad stations. The rate to Shanghai is 0.23 yen; to New York, 2.16 yen (\$1.077 United States currency).

TELEPHONES

Antung has a local telephone system operated by the Chinese municipality. There are 530 subscribers. Approximate rates are \$3 per month. The cost of installation is borne by the subscribers. Japanese equipment is used; manual operation.

The Imperial Japanese Department of Communications operates a telephone system in Antung having 891 subscribers. It has long-distance connections with all points in the South Manchuria Railway zone, including Mukden, Changchun, Dairen, Newchwang, and with Pingyang in Chosen. The rates are \$3.49 per month; cost of installation is borne by subscriber; Japanese equipment; manual operation.

Fenghwangcheng has a local telephone system operated by the Chinese municipality; there are 50 subscribers; Japanese equipment; manual operation.

POSTAL FACILITIES

The Chinese Postal Administration covers the interior of the consular district very efficiently. In Antung it receives and accepts for transmission mail matter, money orders, and parcels from and to the United States at the rates prevailing at other first-class post offices in China. The Japanese Department of Communications has two post offices in the Japanese settlement in Antung and maintains offices at other important stations along the Antung-Mukden line. These handle mail matter, parcels, and money orders from and to the Japanese Empire, railway zone in Manchuria, and all foreign countries.

Foreign postal remittances in both Chinese and Japanese post offices are limited to \$100 and their foreign equivalent, and both offices accept for transmission parcels weighing up to 11 kilograms.

PUBLIC UTILITIES

ELECTRIC-LIGHT PLANTS

The South Manchuria Railway Co.'s plant, equipped with two 3,500-kilowatt dynamos (rates 10 cents per kilowatt hour) is adequate for the present lighting and industrial requirements of both the Japanese settlement and the native city of Antung. It also supplies the city of Shingishu, Chosen, across the Yalu River from Antung, with its light and power. The Chinese municipality is planning to erect a 1,000-kilowatt plant to supply light and power to the new industrial section of north Antung. The harnessing of the current of the upper Yalu River for generating electricity has been under contemplation for a long time. In 1923 a survey of the current and different heads was made under the auspices of the South Manchuria Railway Co. The findings of the survey party are said to have been disappointing, and action on the project has been deferred indefinitely.

WATERWORKS

The railway company waterworks serve only the Japanese settlement, in which reside some 10,500 Japanese, 3,000 Koreans, and 20,000 Chinese. The Chinese municipality has definite plans for

constructing waterworks for the native city, and is laying aside a special fund for that purpose. According to its program, the waterworks project will be carried out in 1926 or 1927, depending on the economic condition of the native city.

TRAMWAYS

There are no tramway systems in the consular district. The South Manchuria Railway Co. in its preliminary budget estimates for 1922-23 included an item for the construction of a tramway system in Antung over a period of two years, but it was struck off in the final budget and has not been proposed since.

CONSERVANCY AND RECLAMATION WORKS

The Yalu River is rapidly deteriorating as a navigable channel, and is in urgent need of conservancy work. Being an international river, reclamation enterprises of any kind involve diplomatic negotiation, and can not be executed without the cooperation of both Chinese and Japanese Governments. In 1922 a plan of conservancy was submitted to the authorities concerned, by the Chinese Maritime Customs Commissioner at Antung, and received their approval. There is no doubt that definite action of some sort will be taken with the advent of stable central authority in China.

EXPORT AND IMPORT TRADE

EXPORTS

The value of exports from Antung in 1923 amounted to \$43,183,279, disposed of as follows: To Japan and Chosen, \$34,477,188; to Chinese ports, \$8,706,091.

Outside of a few small shipments of ginseng and pongee silk, with a total value of \$1,151, there were no direct exports to the United States in 1923. The only products of the region marketable and finding their way to the United States are tussah reeled raw silk, reeling waste, and pongee silk. These articles are shipped from Antung to the Shanghai market and there bought by direct exporters to the United States. Raw tussah valued at approximately \$16,000,000 was produced in China in 1923, of which the United States took over \$7,000,000 worth. Over half of this silk was produced in Antung, and yet there was no direct connection between the American market and this source of supply. A number of reasons—notably the lack of banking and exchange facilities, the absence of any silk testing agency, the relative insignificance of tussah in the American silk industry, the local commercial viewpoint, and the ignorance of the reelers—are responsible for this state of affairs.

Nevertheless, it is difficult to explain the neglect of this important source of raw material by American manufacturers. Outside of official delegates from the silk industry, no American silk buyer has ever found it worth his while to visit Antung for the purpose of establishing direct personal contacts with producers and studying ways and means of doing direct business with them. The difficulty of financing shipments is not insurmountable, for telegraph facili-

ties are excellent, and producers can quote in Shanghai taels, which are quoted by American banks, as well as Antung or Chengping taels, which are not quoted, and can draw on credits opened for them in Shanghai. Japanese buyers contract for their purchases on the spot and pay for them in yen at prevailing exchange rates. There is no apparent reason why American buyers could not do the same.

Eighty per cent of the tussah silk production of Antung goes to the silk mills in Fukui, Japan, where it is woven into pongee for the American market to the value of about \$10,000,000 every year. The development of the pongee weaving industry in Antung, the logical center of pongee manufacture, is retarded by the limited capital of the reelers and the lack of direct interest in this market on the part of American pongee users. There is no doubt that the industry would be greatly stimulated by the presence or occasional visit of American buyers. Pongee weaving offers an opportunity for profitable investment of American capital.

IMPORTS

The figures in the following table show the principal articles imported into Antung in 1913 and 1923:

Imports	1913	1923
Cotton goods:		
Shirtings, gray.....pieces.....	24, 506	421, 200
Sheetings, gray.....do.....	1, 308, 876	149, 136
Shirtings, white, plain, and figures.....do.....	39, 422	111, 831
Drills.....do.....	71, 771	117, 331
Jeans.....do.....	46, 662	549, 346
Cambrics, lawns, muslins, white, dyed, and printed.....do.....	2, 515	7, 930
Chintzes and plain cotton prints.....do.....	1, 307	78, 363
T cloths, gray.....do.....	2, 909	29, 871
Printed T cloths.....do.....	20	2, 265
Turkey-red cottons and T cloths.....do.....	5, 330	85, 255
Dyed cottons:		
Shirtings and sheetings.....do.....		25, 157
Drills.....do.....		156, 394
Jeans.....do.....		248, 592
Cotton italians, venetians, lastings, and poplins.....do.....	11, 882	53, 488
Cotton flannel.....do.....	10, 235	25, 723
Fancy woven cloth.....yards.....	285, 164	
Cottons, yarn dyed.....do.....		28, 843, 346
Japanese cotton cloth.....do.....	316, 869	
Velvets, velveteen.....do.....	33, 426	115, 245
Yarn, cotton.....pounds.....	826, 400	10, 084, 858
Thread, cotton, spools.....gross.....	6, 490	57, 636
Chinese sheetings.....pieces.....	4, 242	159, 278
Chinese drills.....do.....	360	10, 056
Chinese yarn.....pounds.....	62, 400	200, 037
Iron bars, nails, pigs, wire, sheets, etc.....tons.....	1, 152	4, 880
Galvanized iron.....pounds.....	285, 733	1, 483, 216
Bags, gunny, cotton, etc.....pieces.....	486, 834	2, 459, 298
Cement.....pounds.....	3, 344, 000	6, 750, 728
Cigarettes.....thousands.....	42, 918	82, 254
Dyes, etc.: Artificial indigo.....pounds.....	171, 333	264, 404
Fish, dried, fresh, etc.....do.....	2, 578, 060	6, 353, 011
Flour.....do.....	22, 753, 333	14, 045, 864
Glass.....boxes.....	1, 738	6, 030
Hides.....pounds.....	650, 133	2, 417, 956
Milk, canned.....dozen.....	3, 803	3, 823
Oil, engine.....gallons.....	11, 410	105, 576
Oil, kerosene:		
American.....do.....	673, 680	722, 330
Sumatra.....do.....	471, 315	184, 000
Paper.....pounds.....	702, 666	1, 441, 454
Rice.....do.....	7, 836, 266	69, 286
Soap, toilet.....dozen.....	44, 666	116, 281
Soda.....pounds.....	1, 774, 400	1, 875, 167
Sugar.....do.....	3, 890, 932	10, 640, 000
Wines: Sake.....do.....	911, 333	2, 808, 278
Tobacco.....do.....		3, 622, 521

The imports into Antung in 1923 originated as follows:

From Japan and Chosen.....	\$22, 074, 060
From foreign countries (via Chinese ports).....	2, 386, 993
From Chinese ports (Chinese products).....	4, 527, 634
Total.....	28, 988, 687

Approximately 60 per cent of Japan's share in the above trade consisted of transit rail shipments to interior markets entered at the Antung customhouse. The remainder of Japanese and other imports represent local consumption. Japan practically monopolized the cotton goods import trade of the port, which amounted to \$15,276,000.

Imports of American goods in 1923 via Shanghai, Dairen, and, to a lesser degree, Kobe, are known or estimated to have been as follows:

Article	Quantity	Value
Wheat flour..... barrels.....	71, 663	\$477, 078
Cigarettes..... thousands.....	100, 550	400, 000
Kerosene..... gallons.....	722, 339	222, 452
Engine oil..... do.....	105, 576	44, 658
Condensed milk..... dozen cans.....	3, 823	5, 312
Iron and steel products..... tons.....	2, 130	132, 000
Candles..... boxes.....	420	11, 000
Clocks, watches, eyeglasses.....		10, 000
Electrical goods.....		15, 000
Hardware and tools (mostly saws, wood screws, and files).....		30, 000
Leather, enameled calf and kid..... pounds.....	86, 716	44, 200
Leather, sole..... do.....	81, 662	20, 000
Sewing machines.....		34, 450
Photographic materials.....		11, 000
Total.....		1, 457, 150

To the foregoing total should be added perhaps \$100,000 more, representing the value of canned food products, raisins, chemicals, unclassified machinery, wire screening, soaps, toilet articles, proprietary medicines, and novelties.

Perhaps the most noteworthy change in the import trade of the port since its opening to foreign commerce is the elimination of American and British cotton goods from the market by Japanese products. Considering Japan's geographical advantages, this change became inevitable with the development of the Japanese cotton industry and with the improvement of the quality of the products turned out by Japanese mills. The rebate of one-third of the import duty on products imported by rail from Chosen, which went into effect upon the completion of the Yalu bridge in 1913, in accord with the custom at other land frontier stations in China, further hastened the end of the American cotton goods trade in southeastern Manchuria, where it once flourished.

Outside of the selling organization of large American corporations and Japanese firms of international repute, which consign stocks to native merchants under the shop-guaranty system, the marketing of American goods is in the hands of small retail dealers. Under present conditions the most advisable course for American manufacturers of products marketable in this consular district is to have their traveling representatives make periodic visits to Antung with the object of taking orders from retailers and putting them in touch with agencies carrying stocks.

MONEY, BANKING, AND CREDIT

BANKS

The Bank of Chosen (Japanese) and the Chung Foo Union Bank (Chinese, whose American correspondent is the American Express Co.) maintain branches at Antung, but the former does not handle American bills.

LOCAL CURRENCY

The currency situation in Antung appears hopeless to the uninitiated foreigner. The following currencies are used, subject to inter-related exchange rates influenced by supply and demand, imports and exports, speculation, confidence or apprehension, and other factors: The Antung or Chengping tael; the small silver dollar, the depreciated Mukden provincial government and Bank of China bank note, copper coins, big silver or Yuan dollars, Bank of Chosen gold-yen notes, and Japanese currency.

Tussah silk, tussah cocoons, bean cake, bean oil, and timber are quoted in Antung taels, settlements of which are made in local native bank orders, sycee, or silver coins at prevailing exchange rates. Tael settlements between native producers and Japanese buyers are made in yen at prevailing rates. Native retailers all price their goods in small-coin dollars. The Shanghai, Tientsin, and Chefoo tael exchange of the Antung tael is quoted daily on the market, and the relation between these currencies is largely governed by trade conditions existing between those ports. The Antung tael is generally slightly lower than the Shanghai tael, seldom exceeding 10 points. Mukden provincial government and Bank of China bank notes are used almost exclusively in the interior. These are heavily depreciated and subject to meteoric fluctuations. Very few big silver or Yuan dollars are in circulation, and no goods are priced in that currency. Remittances to Shanghai and Tientsin are made by native bill brokers and exchange shops, or by direct arrangement between exporters and importers. The local agency of the Bank of China also remits money and cashes orders to and from other Chinese ports, but its discount rates (from 2 to 5 per cent) are too high to attract much business.

The par value of the Yuan dollar is small-silver coin dollar 1.20. It rises as high as 1.30 and falls as low as 1.17. In times of peace and confidence the Yuan dollar exchanges for Mukden provincial or Bank of China bank note dollars only 1.50, but this rate rises to as much as 2.30 in time of civil war or fear thereof.

CREDITS

American firms carrying stocks and otherwise doing business in Antung and the interior usually have their native agents turn over their receipts to some exchange shop or small banking establishment, which remits the amounts thus turned in to the central agency in Shanghai or Mukden at favorable opportunities. This service is usually performed free of charge in return for the use of the money while it is in their hands. Foreign firms carry on business

as a rule through a comprador, who acts as guarantor for sub-agents and attends to collections and remittances.

While the existing exchange situation may appear prohibitive of direct business between American exporters and native merchants, the difficulty is not altogether insurmountable. The direct sale of American goods would no doubt be complicated without a selling organization on the spot. Credits would certainly be out of the question, and native merchants would have to remit cash with their orders. They could doubtless do this through their Shanghai correspondents.

ADVERTISING

Newspaper advertising is not profitable in view of the small proportion of the native population reading newspapers. Billboards and bright-colored posters appear to be productive of best results. Conspicuous brands on containers of staple products like flour, sugar, and kerosene, are also helpful. Native consumers are inclined to favor goods which carry with them small premiums, no matter how worthless. Sales schemes of all kinds, particularly in the cigarette business, entailing prizes, free moving-picture shows and theatricals, and the like, seem to obtain very good results.

Catalogues should invariably have export-trade price lists and discounts inserted in them, as prospective importers are much less interested in descriptions of quality and capacity of goods than they are in price. This is particularly true in the case of machinery to be used in mills about to be established by corporate funds or required for municipal purposes.

TRAVEL FACILITIES

In Antung the Japanese hotel, Anto, has 20 rooms, American plan. Rooms can also be had on the European plan. There are also numerous Japanese inns in Antung. The Shingishu Hotel, in Shingishu, Chosen, just across the river from Antung, has 10 rooms, American or European plan.

American travelers going from China to Chosen or Japan via Antung must have a valid Japanese visa on their passports. A Japanese passport inspection is conducted on the train as soon as the border is crossed. Travelers without proper travel documents are taken off the train and deported to Antung.

In view of the difficulty of securing guides and interpreters in Antung, American commercial travelers new to the place will find it helpful to get in touch with the American consulate without delay.

During the navigation season there is one weekly sailing from Antung to Shanghai by British coastwise vessels. The fare is \$50 (Mex.), per first-class passage. There are also biweekly sailings to Tientsin on Japanese steamers, the first-class fare being 35 yen. After the port is closed, travel by rail to Dairen is necessary in order to make steamer connections. Antung is, of course, connected with the entire Chinese Government and Chinese Eastern Railway systems, and through tickets are issued at the Antung station to any point on those systems.

TRADE ORGANIZATIONS

The Chinese Chamber of Commerce is the municipal body of the native city, as well as a commercial organization. It collects all city taxes and carries out all city public works. It also owns exclusive tracts of city land. In the commercial field it makes trade investigations, issues letters of introduction to its members, and otherwise assists commercial travelers and trade investigators, acts as liquidator and receiver in bankruptcy proceedings, arbitrates in commercial disputes, and is a very powerful and helpful agent in general.

The Japanese Chamber of Commerce is a purely commercial organization, and its purpose is to foster Japanese trade, both import and export, in the consular district. It maintains for Japanese manufacturers a commercial museum of the raw products of the region, and of manufactured Japanese goods for local buyers. An interesting feature of the Japanese commercial museum is its display of Yalu timber and locally manufactured lumber specimens. The museum itself is built of logs from the Yalu forests in their natural state.

The Chinese Silk Guild is an association of raw tussah-silk reelers. The activities of the association are connected with the advancement of the local silk industry.

PROPERTY VALUES AND RENTS

In the native city of Antung the purchase price of land is from \$280 to \$560 per mow (733½ square yards). The rent of good office quarters on the best streets is from \$25 to \$60 per month. Residences rent for from \$35 to \$75 a month.

In the Japanese settlement of Antung, the right of purchase is not extended to foreigners, but land may be leased for a term of 20 years and ownership of buildings is allowed. Good office quarters may be rented for 60 to 100 yen a month. The rent of a house with a garden varies from 30 to 100 yen per month.

LIVING COSTS

The amounts shown in the following table are the minimum required to maintain respectability and good standing in the community. The estimated living expenses given represent the average cost of keeping up a domestic establishment. Single men may run a mess together and reduce individual expenses considerably. An important item in living costs in Antung is winter clothing.

	Hotel, board and room per month	Board (including servants' wages)	Rent (not including heat and light)	Living expenses
	Yen			
Single man.....	200 to 250	\$60	\$30	\$110
Single woman.....	200 to 250	45	30	65
Married couple.....	300 to 375	90	50	165
Married couple with two children.....		115	60	200

Foreigners coming to Antung to reside must naturally be prepared to miss the recreational facilities of larger and gayer foreign communities in the Far East, and to lead quiet and monotonous lives. These disadvantages, however, are offset to a certain extent by a number of considerations, among which are clear, blue skies and a splendid climate, the opportunity to save money, and outdoor recreational facilities in magnificent natural surroundings. The local Chinese Maritime Customs maintains for its staff a club to which all foreign residents may belong. Persons fond of hunting have opportunities for sport unequaled in any other part of China. The tidal flats of the Yalu Delta are alive with geese and all manner of wild fowl at certain seasons of the year; and pheasants, deer, and wild boar abound in the neighboring districts of Chosen. In the athletic line there are tennis in the summer and skating throughout the winter. Children of school age may be sent to the schools for foreign children in Pingyang and Seoul, Chosen, 6 and 12 hours, respectively, from Antung by rail.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

Perhaps no port in the Far East has grown so rapidly in commerce and population in recent years as has Antung. During the 10-year period from 1913 to 1923, the sea-borne trade, which relates to goods consumed and produced in Antung alone, increased fourfold.

The population of the city in the period 1913 to 1923 is estimated to have increased threefold. While the imports for local consumption have grown proportionately, it is the industrial development of the port that is most astonishing.

Year after year since 1913 exports have exceeded imports in increasing proportions. The wealth represented by this steady excess has remained in the land, and its manifestations are apparent everywhere.

The phenomenal growth of the port must be attributed to the completion of the Antung-Mukden Railway in 1911 and to its linking up with the Japanese Government Railway system in 1913 by means of the Yalu River bridge. The Antung-Mukden Railway affords a striking example of the potentialities for trade and industrial development lying in railroad construction in China.

CHANGSHA CONSULAR DISTRICT

By Vice Consul C. D. Meinhardt

LOCATION AND AREA

The Changsha consular district lies south of the Yangtze River in Central China and includes Hunan Province, with an area of 83,000 square miles, and Kweichow Province, with an area of 67,000 square miles. It is thus the equivalent in size to New England, New York, and Indiana combined, and lies between 25° and 30° north latitude, about the same as Florida.

The climate is damp, with much fog and many clouds, especially in winter and spring. The average annual rainfall is 60 inches. May and June are the rainiest months, late summer and autumn constituting the dry season. The average minimum temperature is 56° F. and the average maximum temperature 71° F.

POPULATION

The Chinese postal census of 1910 estimated the population at 40,000,000—29,000,000 in Hunan and 11,000,000 in Kweichow. The average density for Hunan is 350 per square mile, for Kweichow 165, and for the whole district 267. The foreign population numbers about 900, including 400 Americans, 200 Japanese, and 150 British.

CITIES

In the following table is given the estimated population of the important cities in this consular district:

City	Population, estimated	Europeans	Americans	American business firms
HUNAN				
Changsha ¹	535,800	140	140	2
Changteh.....	300,000	15	10	None.
Siangtan.....	300,000	5	31	None.
Yochow ¹	4,500	12	35	None.
KWEICHOW				
Kweiyang.....	100,000	.....	.....	None.

¹ Treaty port.

The other principal cities in Hunan are: Hengchow, 21 Americans; Liling, 18 Americans; Chenchow, 18 Americans; Paoking and Yungchow. In Kweichow the chief cities are Anshun, Tsunyi, and Hsingyi, with no American residents. None of these cities have a population of more than 50,000.

There are no foreign concessions or settlements in the district.

Changsha and Siangtan are the chief distributing centers for the trade of eastern and central Hunan, while Yochow and Changteh are distributing centers for the north and west.

AGRICULTURE

Changsha produces a great variety of products of the soil, as rice, tea, beans, ramie, sesame, bamboo, wood oil, vegetable tallow, cotton, tobacco, melons, fruits, wheat, buckwheat, barley, maize, yams, opium, indigo, taro, ginger, water chestnuts, and arrowroot (or lily root).

The production per acre of these crops is extremely difficult to ascertain owing to the irregularity of the fields and the varied units of measurement. The annual rice harvest is estimated at about 360,000,000 bushels; cotton, 260,000 piculs (1 picul equals 180 pounds); wheat, 330,000 bushels. From 2 to 3 piculs of 180 pounds each of rice are produced per mow, or about 54 bushels per acre. Beans are said to average about 14 bushels per acre, and tobacco about 1,200 pounds.

MINERALS AND MINING

Hunan has large deposits of antimony, lead, zinc, iron, tin, bismuth, tungsten, coal, manganese, arsenic, and quicksilver. It is the yearly exports of approximately \$3,000,000 (United States currency) worth of these products that settles for a substantial part of the Province's yearly import of \$11,000,000 (United States currency) worth of foreign goods. Still the present production of ores is no criterion of the mineral wealth of the Province. The Hunanese, according to their own historians, have been miners since the time of the Chou dynasty (1122 to 255 B. C.), and yet the number of minerals in the Province has not been completely determined nor the extent of deposits ascertained. The scanty reports which come from Kweichow suggest considerable mineral wealth, but its exploitation is not as yet of much importance and will not be until political, commercial, and transportation conditions are improved.

ANTIMONY

The antimony deposits of Hunan are the most extensive in the world, and it is from these deposits that well over 50 per cent of the world's demand is supplied. The principal mining fields are located in the central part of the Province, in a section bounded by the four cities of Yiyang, Siangtan, Mukangchow, and Yuanchow. The largest deposits are near Yiyang, Paoking, Sinhwa, and Sikwangshan, the latter being the most important source of production at the present time. Qualified engineers have estimated the visible tonnage at 2,000,000 tons of ore. The ore is stibnite (antimony sulphide), and occurs in the form of seams, pockets, and masses embedded in a stratum of quartzite sandstone 150 feet thick covered by a 45-foot layer of limestone. The richness of the ores varies from those mined at Sikwangshan, which average about 25 per cent antimony, to some of the small outlying mines, which have as high as 60 per cent of the metal. Most of the picked ore which is being exported at this time contains 30 per cent of antimony. Antimony

crude assays about 70 per cent antimony, while antimony regulus is usually warranted to be 99.5 per cent pure, arsenic being the most conspicuous impurity. Some antimony oxide is also produced for export by furnaces located at Sikwangshan. The number of antimony mines and mining companies is variously estimated at from 200 to 300. Some are active, but many are not. An increase in the price of antimony usually brings some of the inactive ones into life; a fall in the price produces the opposite result.

Mining for the most part is done in a primitive Chinese fashion, galleries being driven in all directions without any attempt at systematization. The small mining companies either sell to the smelters located near the mines or have their ores treated by them, making payment in kind, and generally sell the crude or regulus through Chinese brokers to the exporting firms located in Changsha. The Herreshmidt process is used in producing the regulus.

LEAD AND ZINC

The lead-zinc zone, as it is denominated by local mining engineers, comprises a diagonal section of the Province about 75 miles wide, extending in a northeast-southwesterly direction across the Province and lying to the south of the antimony zone. The place these two minerals occupy in the industrial life of the Province may be understood from the customs statistics for 1923, which show a combined export of lead and zinc valued at 1,107,060 teals. The principal production center for these ores at present is at Shuikoushan, 212 miles south of Changsha or 32 miles south of Hengchow on the Siang River. There are other small mines, the only one of importance, however, being that near Chenchow under the control of a German company.

The ore deposits at Shuikoushan consist of large irregularly shaped bodies of galena, zinc blend, and iron and copper pyrites. Official records covering the past 20 years show that the mine has produced during this period more than 50,000 tons of lead concentrates and 126,000 tons of zinc concentrates, but there are abundant evidences that the mines have been worked by the natives for centuries. The average value of mine samples is 9 ounces silver, 12.4 per cent lead, and 26.7 per cent zinc. Both the Shuikoushan and the Chenchow mines are nearly exhausted unless new deposits are discovered. The Shuikoushan mines are controlled by the Hunan government, and purchases of ores by exporting companies must be made through two or three conflicting groups of government officials, which renders purchasing by foreign exporting firms difficult and uncertain.

TIN

The tin deposits are located in the most southerly part of Hunan, in what is known as the tin-tungsten-bismuth zone. Since the larger part of the tin mined in Hunan moves south through Kwangtung, it is impossible to say what amount is produced. The ores are cassiterite embedded in limestone tilted and marmorized by the granite mass. The limestone is probably Devonian. The tin of Hunan is of very good quality; the ores assay about 70 per cent tin; and the smelted metal is usually 99 per cent pure tin, the im-

purities being small quantities or traces of antimony, arsenic, copper, lead, silver, and bismuth.

There are many tin mines being worked, usually by small Chinese companies, which have concessions from the Hunan government. The most productive mines are in the Ichang and Lanhwa districts. With the concessions which the mining companies receive from the Hunan Board of Mines goes the stipulation that all ores shall be sold to the board at a price agreed upon beforehand. The Government, therefore, controls most of the output of tin.

TUNGSTEN AND BISMUTH

Tungsten occurs principally in the mountains on the south and southwest border of Hunan in deposits which are associated with tin and bismuth. The ore is wolframite (tungstate of iron and manganese); the tungsten trioxide (WO_3) content averages 68 per cent; but the concentration of the metal so far has proved to be rather low and it is not unusual to find 3 to 4 per cent of tin and 2 to 3 per cent of arsenic. There are over 200 Chinese companies engaged in the mining of tungsten. Operations are conducted in the most primitive fashion and marketing is carried on in very much the same manner as in the case of antimony—that is, selling through brokers to Changsha exporting firms. According to engineers who have crossed the country, wolfram exists in large quantities; an increase in the demand for tungsten would greatly accelerate the production in Hunan, for the present exports are no criterion of the potential output.

A French mining engineer, after making a survey of the Province, stated that in the future bismuth would probably be the most generally exploited mineral in Hunan. The present production of bismuth, the export of which does not even call for separate entry in the customs returns, is infinitesimal in comparison with the resources. The bismuth, which occurs as a sulphide, is combined chemically with lead and mechanically with iron pyrites. A French company is smelting a little bismuth at present, but production on a paying basis requires a more extensive outlay of capital than any company under existing conditions is willing to make.

IRON AND MANGANESE

Little progress has been made in the working of the reported extensive iron resources of Hunan. The principal producing section at present is in the south central part of the Province, with the city of Pao-king as a center. Native methods of mining and smelting are used and the pigs are shipped to the larger cities of the Province for the use of the local ironworkers only.

Manganese occurs abundantly in Hunan, but there is comparatively little of the ore which is of an exportable quality—that is, 45 per cent or over of manganese, under 10 per cent of silica, and less than 2 per cent of sulphur. However, ore coming up to these specifications is mined in the Siantan district, 30 miles south of Changsha. Large deposits containing 38 and 40 per cent of manganese are to be found at Leiyang and Changning, south of Hengchow, which could be very profitably used if the Province ever de-

velops into a steel-producing center. Most of the exports of manganese from Hunan are for Chinese or Japanese consumption.

ARSENIC

Arsenic in both its mispickel and realgar forms is mined in Hunan. The principal production centers are in the Chenchow and Kweichow districts in the south and in Fenghwang district in the west. The white arsenic ore (mispickel) carries from 8 to 15 per cent of arsenic; the percentage of arsenic in the realgar is somewhat higher. The realgar is unimportant from the standpoint of foreign trade; white arsenic, on the other hand, within the past few years has become an important article of export, particularly to the United States. The mining is carried on after native methods by Chinese mining companies, which sell the refined arsenic oxide "cake" to exporting firms.

QUICKSILVER

Mercury occurs in the west of Hunan near the border of Kweichow. Only two mines are being worked at this time—one at Hantzuping, 20 miles west of Fenghwang, and the second at Tatung, 25 miles southwest of that town. The ore is cinnabar (mercuric sulphide). At Hantzuping the deposits, in which cinnabar is associated with a carbonaceous material, occur under a layer of dolomite 6 feet thick. At Tatung the ore is embedded in a mass of dolomite slate 100 feet thick in small crystals. The mines show evidences of having been worked for several centuries. At both mines the richer, picked ore is crushed by hand and panned down for the cinnabar content, but the poorer ore and the tailings from the panning are retorted for their quicksilver content. The production of cinnabar and quicksilver in Hunan is several times larger than the customs statistics show, since much of the cinnabar is consumed locally and a part of the quicksilver finds its way out of the Province through other avenues than the customhouses.

GOLD AND SILVER

Gold is washed in several places in the Province, but it is secured in paying quantities only at the mines located in Pinkiang, in northwestern Hunan. These mines are controlled by the Hunan Board of Mines. A local mining engineer has stated that there are large deposits in the Pinkiang mines which, if worked in a modern and efficient way, could be made to produce gold in considerable quantities. Other gold mines are located in the district of Taoyuan, on the Yuan River; at Liulincha, in the district of Shenchow; and at Huitung, in the southwestern part of the Province. Some silver is obtained in the production of other minerals, notably lead, but the amount is not large and is consumed locally by the silversmiths.

COAL AND COKE

The coal fields of Hunan are rich and extensive, containing both the anthracite and bituminous varieties. The largest fields occur between the Siang River and the eastern border of the Province. Richthofen estimates the area of these eastern fields to be approxi-

mately 21,700 square miles, but points out that a great part of the area is covered by a sediment many thousand feet thick and more recent in age than the coal formation. He divides this field into two nearly equal portions, calling one the Lei River field and the other the Siang River field. Of the Lei River field the most important region is situated on both sides of the Lei River. All of these deposits are anthracite.

The Siang River coal field is a reappearance of the coal measures north of the Lei River field where the Lei River joins the Siang. Here, however, the measures are quite different in character from the formations in the Leiyang field and probably precede them in age. They bear bituminous coal altogether.

Coal is also found in the west of the Province around Shenchow and Yuanchow. Fairly large deposits occur in the district about Paoking, whence the coal is exported by the Tzu River to Hankow. The mining and trade in Hunan coal is entirely in the hands of small Chinese companies. Under more efficient management and by the employment of modern mining methods the output of coal in Hunan could be increased many times and the cost of production substantially reduced.

Much of the coal and practically all of the coke exported through the Changsha customhouse originates in the adjoining Province of Kiangsi at the Anyuan mines near the Hunan border. The trade is entirely in the hands of the Chinese.

OTHER MINERALS

Other minerals found in Hunan in varied amounts and exploited only slightly or not at all include sulphur, graphite, alum, nickel, cobalt, copper, molybdenum, and asbestos. Although there are large deposits of graphite in Hunan, it is all amorphous, and hence enters very little into the trade of the Province. The mines might be worked profitably on a large scale under foreign management. Sulphur is produced principally at Pingkiang, Sinhwa, and Chenchow from the destructive distillation of iron pyrites. Alum is mined in small quantities for local consumption. Cobalt, copper, and nickel are found in variable quantities in the lead-zinc zone and molybdenum in the zone of tin, tungsten, and bismuth.

TRADE IN MINERALS

The Hunan Board of Mines has supervision over all the mining enterprises of Hunan; in some cases this supervision amounts to direct control, as in the case of the lead-zinc mines at Shuikoushan, in others to only nominal control. It is a well-known regulation of the Chinese Government that foreigners can not own a controlling interest in mining enterprises, and it is this regulation more than anything else which is responsible for the slow development of the mineral resources of Hunan. Some of the foreign companies located in Changsha are taking a more or less active part in the mining and smelting end of the business, but they are constantly beset with difficulties. In some cases advances of capital are made to Chinese mining companies which contract to turn over a certain per cent of the output of the mine to the investor; in other cases the foreign firm takes virtual control, operating under grants to Chinese firms.

Neither of these methods, however, has proved to be a satisfactory substitution for legal proprietorship.

The bulk of the trade, therefore, is conducted through the medium of Chinese brokers or representatives of mining companies who arrange contracts between the foreign exporting companies and the producers. The customary manner of payment is cash against delivery in Changsha godowns (warehouses), but the practice of paying "bargain money" upon contracts has grown up.

Owing to certain local trade conditions, direct trade in minerals between foreign importers and Chinese mining companies is generally impracticable and often impossible. The company wishing to purchase Hunan minerals must either establish its own agency in Changsha or buy through the exporting firms which are located there and are engaged in the business.

The following table contains the exports of minerals from Hunan for the calendar year 1923. The United States took 50 per cent of the antimony exports for that year, and large portions of the arsenic, tungsten, and quicksilver shipments. The greater part of the zinc and lead went to Germany and Belgium; coal, coke, and manganese to Japan; and tin and tungsten to Hongkong for transshipment.

Items	1923		Items	1923	
	Quantity	Value		Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>		<i>Piculs</i>	<i>Haikwan taels</i>
Antimony:			Manganese ore	318, 713	128, 629
Regulus	193, 962	1, 250, 778	Quicksilver	385	50, 436
Crude	47, 027	221, 606	Tin, in slabs	2, 447	138, 647
Ore	32, 849	152, 575	Tungsten ore	4, 878	48, 155
Arsenic	5, 480	49, 649	Zinc		
Coal	1 80, 744	484, 464	Spelter	10, 607	97, 584
Coke	1 160, 530	2, 354, 249	Ore	979, 473	658, 812
Lead:					
Smelted	49	529			
Ore	84, 509	284, 211			

1 Tons.

NOTE.—One picul equals 133½ pounds avoirdupois, and the value of the haikwan tael in 1923 was 80 cents, United States currency.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

Statistics relative to Hunan industries are not available, and estimates as to the capacity, capitalization, and output of native enterprises, with a few exceptions, would be pure guesswork, apt to be more misleading than informative. The industries of the two Provinces are still in the domestic handicraft stage which obtained in Europe prior to the industrial revolution.

Cloth dyeing and weaving; paper making; the manufacture of firecrackers, grass cloth, furniture, hair rugs, paper umbrellas; embroidery, oil pressing, tea firing; and the making of iron, brass, and pewter ware—each is an important industry made up of hundreds—in some cases, thousands—of home, farm, and small-shop producers whose individual contributions when lumped together make an aggregate output of considerable size. The more than \$1,000,000 worth of synthetic dyes which are imported into Hunan is evidence of the fact that cloth dyeing is an important industry, yet it is

doubtful that any one of the hundreds of dyeing shops has a capitalization of \$1,000.

Cotton weaving and spinning fall within the same category, except that in the case of the latter a modern cotton-spinning mill supplements the output of the spinning wheels. This mill is the property of the Hunan government, which has leased it to local business men for a period of 15 years. The capitalization of the leasing company is \$600,000 (silver) and the value of the mill property is estimated at \$1,600,000. There are 60,000 spindles in the mill, the number of employees is 2,200 (one-third of normal number), and the monthly output averages 2,400 bales of yarn. There is one flour mill in Hunan, located at Changsha, with a capitalization of \$200,000 (silver), an annual output valued at \$200,000 (silver), and a working force of 326 men, which partially supplies the local demand for wheat flour. Three small glass factories located at Changsha manufacture, for local consumption, oil lamps, lamp chimneys, glass tiles, and vases, the value of their combined yearly output being something over \$75,000 (silver.)

Furniture making, manufacturing of shoes and leather goods, and tailoring, though often overlooked because of their small-scale character, occupy positions of importance in the industrial life of the Province both as employers of thousands of workmen and as makers of practically all of the clothing, shoes, and household furnishings used by the natives.

The yearly exports of firecrackers, valued at \$1,000,000; paper, \$290,000; grass cloth, \$150,000; brass ware, \$12,000; umbrellas, \$130,000; and rugs, \$3,000, which are only a fraction of the total production, since the local consumption of these commodities is very large, represent the output of hundreds of small producers, who roll the firecrackers by hand, manufacture the paper, brass ware, and umbrellas, and weave the grass cloth and rugs in their homes or shops and sell to native retailers or to firms which assemble the goods for export. Tea firing and oil pressing are done for the most part on the farm of the producer. Wood oil is expressed by means of crude wooden presses, the inefficiency of which is responsible for considerable waste. The large volume of trade in wood oil will eventually demand more modern and scientific methods in the production. The brick and tile kilns of Hunan completely supply the large and general demand for this type of building material. The product of the kilns is not, as a rule, of very durable quality, although bricks made in Liling are said to be of excellent grade. The individual brickyards do not represent the investment of much capital, but the aggregate capitalization of such industries is well over \$1,000,000 (silver).

LABOR CONDITIONS

A noteworthy recent development affecting labor conditions in Hunan has been the general advance in the scale of wages. This has been particularly noticeable in the building trades, which have been very active during recent years because of the street-widening program initiated in Changsha as well as in other cities of the Province. The pay for carpenters and bricklayers has increased from 35 to 50 cents a day in silver and that for unskilled helpers

from 25 to 30 cents a day. Employees in the mining and smelting industries receive a minimum of 40 cents a day; those in the dyeing trades receive about the same amount but with food and lodging included. Weavers are furnished their food and paid 35 cents a day; pieceworkers in the cotton mill are paid from 25 cents to \$1 a day, according to the nature of their work. The wages of workers in the trades connected with the manufacture of firecrackers, glass, flour, umbrellas, etc., are determined by the amount of work turned out. The average increase in wages may be roughly placed at 25 per cent. The average number of hours in a working day is 10, although workers receiving piece wages usually work longer, and employees in the cotton mill have an 8-hour schedule.

The employment of women and children in Hunan is quite common, especially in the making of firecrackers, embroidery, grass cloth, and other piecework trades which allow the laborers to work in their homes. The spinning and weaving industries are also large employers of female labor. The rate of wages for the type of labor under discussion is substantially less than that for male workers.

The laborers in the various branches of industry are organized into labor unions, which in turn are united into a general federation of labor with headquarters at Changsha.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The thousands of miles of rivers in Hunan furnish its chief means of transportation, in which thousands of junks are used. Junk transportation rates are subject to extreme and sudden fluctuations, due to difficulties of navigation, shortage of boats, military disturbances, and bandits. All shipping arrangements must be made locally. Likin is collected on goods in transit, except between the treaty ports of Changsha and Yochow. The rates of taxation are not published, and so vary with conditions. In addition, small destination taxes are often levied on goods at the end of their journey.

RAILWAYS

There are no railway lines under construction, but it is expected that the Hunan section, 270 miles, of the Canton-Hankow Railway will eventually be continued for about 250 miles to connect with the Kwangtung section. This line will then be one of the most important trunk lines of the country. At present the roadbed and rolling stock of the line are in a very dilapidated condition, owing to the exhaustion of capital and the frequent commandeering of the line by the military. Coal and coke from the mines at Anyuan, Kiangsi, now furnish the chief freight.

ROADS

Thirty miles of the road from Changsha to Siangtan are constructed for and 30 miles adaptable to motor transportation.

The road from Siangtan to Siangsiang has 29 miles constructed for and 29 miles that can be adapted to motor transportation. A continuation of this road is partially completed for 30 miles more to Yungfeng, and a still further stretch of 60 miles is contemplated.

Another road, approximately 100 miles long, has been started to connect Hengchowfu and Chenchow in southern Hunan.

Motor cars, carts, and camels are not used for the transportation of goods, nor are pack animals extensively used.

TELEGRAPHS

The Chinese Government Telegraph Administration maintains 64 offices in the district. The service is slow, inefficient, and unreliable, owing to the semi-independence of the two Provinces. There are no cables and no wireless stations.

TELEPHONES

The only telephone system in the district is at Changsha, operated by the Hunan Telephone Administration. It has a manual exchange, with 934 telephones in use. A line with a single telephone at the end extends to Siangtan, 30 miles south of Changsha. Telephone rates are \$6 Mex. per month, and a deposit of \$30 Mex. is required from subscribers. Equipment is of American make.

POSTAL FACILITIES

An efficient postal service reaches all cities and many smaller places in the district. The usual facilities are offered.

PUBLIC UTILITIES

ELECTRIC-LIGHT PLANTS

The electric-light companies in the district, all owned and operated by Chinese, are:

The Hunan Electric Light & Power Co., Changsha, Hunan.—Generator capacity, 1,525 K. V. A.; units, 3 German (A. E. G.) generators 200 K. V. A. each, one German (Siemens) generator 300 K. V. A., one American generator 625 K. V. A.; prime movers, 4 steam engines and one 600 horsepower steam turbine; current, alternating, 50 cycles, 220 voltage at customers' terminals; number of customers, 4,000; service, 18 hours in 24; rates, 15 cents (silver) per kilowatt hour; flat charge of \$1 per month per light in absence of meter.

Kwang Hwa Electric Light Co., Changsha, Hunan.—Generator capacity 650 K. V. A.; make of generator A. E. G. (German); prime movers, two Curtis steam turbines; current, alternating, 50 cycles, 220 voltage at customers' terminals; number of customers, 2,000; service, 14 hours in 24; rates, 15 cents per kilowatt hour or flat charge for each light in absence of meter of \$1 per month.

Yiyang Electric Light Co., Yiyang, Hunan.—Two units, American make; prime mover, one steam turbine (American make); current, alternating, 60 cycles, 125 volts; number of customers, 1,000; service, 9 hours in 24; rates, \$1 (Yuan) per month per light; no meters.

The Tung Hai Electric Light Co., Yochow, Hunan.—Generator, Japanese make (Masaki Iron Works); capacity, 42 kilowatts; prime mover, one petrol-cum engine (Japanese); current, direct, 120 voltage at generator and terminals; number of customers, 500; service, 8 hours in 24; charge, \$1.20 (Yuan) per month per light.

Electrification in Hunan is progressing at an encouraging rate, there being many cities and some of the mines in the Province which await only the coming of more stable political conditions before establishing electric power and light plants. The rivers flowing through the mountainous mineralized regions afford abundant opportunities for the utilization of their "white coal."

WATERWORKS

There are no waterworks in the district, although a system is badly needed at Changsha, and even in some of the smaller cities.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

As all of the ports in Hunan are river ports without any public docks, dock accommodations, or special facilities for the handling of cargo, it is necessary for all steamers, tugs, and lighters to anchor in the stream or alongside private floating docks or pontoons. Coolie carriers and open boats are used for transferring cargo from vessels to shore. The depth of water varies with the season and the distance from shore. For instance, in summer, ocean-going vessels can anchor at Yochow, and coasting vessels can even reach Changsha; but when the water is low, not even the shallow-draft river steamers can leave the Yangtze River at Yochow to enter the waters of this Province. Cargo for the interior is transshipped at Changsha, Yochow, Changteh, and Sianktan for shipment farther into the interior by junks. These are sometimes towed by launches.

Cargo-handling facilities for heavy cargo must be provided by the ships or lighters conveying it, for there are no cranes, shears, or other devices for the handling of cargo at any of the ports. The rate at which cargo is discharged from vessels depends upon the number of coolies who can work without interfering with each other.

The customary precautions should be taken in the packing and marking of packages to guard against pilferage and wet weather.

WAREHOUSING

All ordinary needs for storage facilities are met in all of the trading centers of the district by private warehouses, mainly owned by the foreign shipping companies. The warehouses are generally of brick construction, with wood used in some of the interiors. Goods are transported by coolies and wheelbarrows. Cargo can seldom be stored in the open owing to the humidity and frequent rainfall. Storage charges average about 1 tael a ton per month in first-class warehouses.

EXPORT AND IMPORT TRADE

The value, in haikwan taels, of the exports and imports of this district for the years 1913 and 1923 are shown in the following table:

Port	Exports		Imports		Exports and imports	
	1913	1923	1913	1923	1913	1923
Changsha.....	<i>Haikwan taels</i> 8, 719, 525	<i>Haikwan taels</i> 15, 729, 983	<i>Haikwan taels</i> 12, 778, 157	<i>Haikwan taels</i> 10, 909, 204	<i>Haikwan taels</i> 21, 497, 682	<i>Haikwan taels</i> 26, 639, 187
Yochow.....	3, 635, 050	15, 498, 678	2, 133, 257	4, 525, 133	5, 768, 307	20, 023, 811
Total.....	12, 354, 575	31, 228, 661	14, 911, 414	15, 434, 337	27, 265, 989	46, 662, 998

NOTE.—The value of the haikwan tael in 1913 was 73 cents (United States currency); in 1923 it was 80 cents.

EXPORTS

The exports of minerals and metals have been discussed in the section given to the treatment of that subject, and it is only necessary here to call attention to the growth in the trade in these products during the years covered by the tables. The dominant place which wood oil (tung oil) occupies in the exports from Yochow is worthy of note; practically all of this oil goes to the United States. Since a great part of the exports from Changsha and Yochow is sent to Hankow and Shanghai for invoicing and export, no figures are obtainable as to the final destination of the goods except in a general way. Thus, since it is known that the United States is one of China's best customers for such products as antimony, wood oil, tungsten, bristles, feathers, and firecrackers, and as Changsha and Yochow are exporters of these products, it is safe to assume that there is a considerable trade between this district and the United States.

In the following table are given the quantity and value of the principal exports through the port of Changsha for the years 1913 and 1923:

Items	1913		1923	
	Quantity	Value	Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
Hides and skins.....	9,467	209,214	800	12,800
Feathers.....	940	10,643	657	10,243
Bamboo shoots.....	1,946	59,655	3,341	73,045
Cereals:				
Rice.....	314,712	711,248	685,744	1,960,463
Wheat.....	14,330	40,123	8,835	19,878
Fruit, dried.....	125	1,412	1,057	17,842
Chinese wood oil.....			14,123	216,505
Tea oil.....	268	2,973	3,030	34,330
Tea, black.....	20	567	31,220	990,040
Camphor.....	81	4,007	79	5,093
Tobacco, leaf.....	1,138	16,153	10,015	120,180
Carpets.....				4,922
Cordage.....	46	520	406	4,361
Cotton.....			50	183
Grass cloth.....	1,408	213,377	798	220,722
Hair, human.....	2,316	148,688	1,508	63,331
Hemp.....	28,370	255,045	22,704	423,656
Paper:				
First quality.....	252	7,797	713	10,452
Second quality.....	40,117	319,332	30,937	319,884
Joss.....	2,359	15,936	2,916	19,675
Coal.....	¹ 257,924	¹ 612,025	¹ 80,744	484,464
Coke.....	¹ 137,306	¹ 194,525	¹ 160,590	2,354,249
Antimony:				
Regulus.....	151,536	637,080	193,962	1,250,778
Crude.....			47,027	221,606
Refuse.....	105,756	33,589		
Ore.....	70,039	137,374	32,849	152,575
Iron, pig.....	4,200	15,330	3,495	11,673
Lead.....			9,978	60,453
Lead ore.....	59,590	177,350	84,509	284,211
Manganese ore.....			318,713	128,629
Tin in slabs.....	2,970	99,934	2,447	138,647
Tungsten ore.....			4,878	48,155
Zinc ore.....	163,850	146,295	979,473	658,812
Zinc spelter.....	200	2,426	10,607	97,584
Brass ware.....	1,534	21,132	469	17,705
Arsenic.....	3,793	50,869	5,480	49,649
Fireworks.....	62,052	768,199	96,297	1,604,308
Medicines.....		28,525		34,075
Realgar.....	1,142	2,034	56	588
Bristles.....	880	42,812	835	124,306
Umbrellas, paper.....	² 73,780	9,931	² 132,126	23,782

¹ Tons.² Pieces.

NOTE.—One picul equals 133½ pounds avoirdupois. The value of the haikwan tael in 1913 was 73 cents; in 1923, 80 cents.

In the following table are given the quantity and value of the principal exports through the port of Yochow for the years 1913 and 1923:

Items	1913		1923	
	Quantity	Value	Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
Hides and skins.....	8,493	322,753	7,571	220,251
Tallow, animal.....	223	2,560	618	9,468
Wax, yellow.....	117	4,666	76	3,086
Feathers.....	347	4,080	370	6,112
Bamboo shoots.....			275	9,367
Rice.....	849,968	1,929,384		
Chinese wood oil.....	36,813	329,108	463,914	1,861,355
Seeds:				
Lily.....	5,745	71,123	7,238	238,130
Rape.....				862
Sesame.....	8,447	55,919	13	84
Tallow, vegetable.....	5,657	62,793	7,899	89,812
Tea:				
Black.....	2	45	6,253	141,318
Green.....	4	65	110	1,417
Leaf.....	1,287	13,082	819	5,311
Camphor.....	5	247	160	7,896
Nutgalls.....	7,280	153,026	24,264	457,619
Coir.....			2,265	13,068
Ramie.....	4,057	58,380	48,051	665,506
Cotton.....	1,377	25,764	28,464	962,937
Paper, second quality.....	384	1,396	37	295
Medicines.....		6,620		62,056
Soda.....			1,315	10,069
Varnish.....	2,675	67,785	5,072	262,730
Bristles.....	301	8,086	87	3,962

NOTE.—One picul equals 133½ poundsavoirdupois. The value of the haikwan tael in 1913 was 73 cents; in 1923 it was 80 cents.

IMPORTS

The greater part of the goods entered at Yochow are destined for Changteh (a city more important commercially than Yochow) and the northwest part of the Province. Changsha, on the other hand, although it is the reservoir from which the southern half of the Province draws its supplies of foreign goods, is itself the largest and most advanced market for such goods in Hunan.

No figures can be given regarding the sources of foreign goods, since practically all such trade, with the exception of that from Japan, is indirect, but rough estimates, based on observations in the Changsha market, may be made for some of the more important articles. The piece-goods trade is dominated by Great Britain and Japan; the United States and Great Britain divide the petroleum trade between them; Germany has over 50 per cent of the trade in dyes, with the United States and Japan having about equal shares; Hongkong and Japan furnish most of the local import of sugar; the British and Chinese control the tobacco market; machinery is furnished by the United States, Germany, England, and Japan (there is a growing preference for American machinery and electrical supplies); Belgium is the source of most of the glass; France and Japan of the perfumes, toilet articles, and soaps; the United States and Great Britain of the tinned plates; the United States has a large portion of the trade in canned foods; and Japan furnishes the

greater part of such products as buttons, needles, stationery, utensils, lamps and lampware, toys, and many cheap articles of manufacture.

As stated, most of the import trade passes through Hankow and Shanghai importing houses before reaching this district. Local agencies or branches are maintained by the firms dealing in such articles as kerosene, dyes, machinery, cigarettes, toilet articles, and electrical supplies. Many of the local dealers in foreign goods effect purchases through representatives which they send periodically to Shanghai or through Chinese merchant guilds in that city with whom they maintain connections.

While it would seem that so extensive and varied a mining industry as exists in Hunan would afford a considerable market for mining machinery, such is not the case. Much of the machinery which was imported during the prosperous years of expansion, near the end of and just after the World War, has been abandoned because its use was unprofitable or because it was ruined by careless handling. This is a discouraging but nevertheless true state of affairs. There is, of course, some machinery used at the Shuikoushan lead-zinc mines and at the Sikwangshan antimony mines, but the vast majority of the ores are extracted without the aid of machinery. Cheap labor (40 cents silver a day for a miner), inexperienced and careless operators, the small size of claims, and the risk involved in making large capital investments because of the political unrest in the Province, with its concomitant insecurity of property, makes a large-scale introduction of mining machinery unprofitable and impracticable.

In the following table is shown the quantity and value of the principal imports through the port of Changsha in the years 1913 and 1923:

Items	1913		1923	
	Quantity	Value	Quantity	Value
Fish and fishery products.....piculs..	4, 049	89, 524	3, 234	104, 691
Leather.....do.....	458	42, 052	1, 679	81, 262
Machine belting.....do.....		2, 121		6, 570
Milk, condensed.....piculs..		9, 968	912	23, 200
Flour.....do.....	471	1, 854	1, 788	8, 205
Fruits, dried.....do.....	1, 644	29, 581	7, 251	112, 714
Pepper, white and black.....do.....	3, 788	71, 443	4, 445	74, 176
Sugar.....do.....	183, 875	987, 919	104, 721	1, 015, 814
Agar-agar.....do.....	40, 928	103, 356	29, 883	128, 499
Cigarettes.....thousands..	30, 009	65, 144	13, 412	84, 080
India-rubber products.....do.....		2, 116		17, 657
Cotton piece goods:				
Shirtings.....pieces.....	510, 394	1, 960, 161	116, 972	1, 398, 811
Sheetings.....do.....	41, 060	114, 811	17, 980	108, 144
Printed cottons.....do.....	57, 590	116, 329	21, 638	118, 313
Dyed cottons.....do.....	185, 073	815, 743	97, 190	807, 053
Drills.....do.....	55, 346	209, 949	50	336
Flannel.....do.....	45, 987	153, 400	4, 328	23, 261
Unenumerated.....do.....		696, 859		228, 560
Cotton yarn.....piculs..	60, 106	1, 502, 549	7, 119	395, 710
Woolen and cotton mixtures.....do.....		156, 497		53, 370
Woolen goods.....do.....		219, 059		44, 718
Bags of all kinds.....pieces..	1, 081, 193	156, 189		67, 097
Clothing.....do.....		55, 049		35, 307
Books.....do.....		13, 761		5, 278
Furniture.....do.....		5, 327		15, 820
Paper.....do.....		135, 467		124, 223
Sandalwood.....piculs..	9, 003	87, 964	6, 515	60, 852
Stationery.....do.....		46, 361		20, 852

Items	1913		1923	
	Quantity	Value	Quantity	Value
		<i>Haikwan taels</i>		<i>Haikwan taels</i>
Crucibles.....		17,592		28,277
Gasoline and petrol..... gallons..	5,051	1,333	8,719	6,028
Lamps and lamp ware.....		68,591		50,872
Looking-glass and mirrors.....		12,360		28,804
Oil:				
Kerosene..... gallons..	8,228,958	992,649	9,512,870	2,892,716
Lubricating..... do.....	59,091	17,928	98,698	43,663
Glass (window) and glassware.....		66,111		72,861
Copper, bars, ingots, slabs..... piculs..	25,630	777,680	169	5,505
Lead, pigs and bars..... do.....	6,883	48,974	3,716	32,992
Iron and mild steel, old and new..... do.....	89,263	319,070	15,698	86,956
Tin in slabs..... do.....	195	8,465	344	21,186
Tinned plates..... do.....	13,091	87,847	21,888	195,616
Bedsteads..... pieces..	633	5,567	326	5,759
Clocks and watches..... do.....	21,335	27,922	9,201	22,789
Needles..... (thousands..)	187,130	37,426	76,450	22,830
Electrical materials and fittings.....		44,468		55,131
Machinery.....		306,117		176,037
Machines, sewing, etc.....		33,350		22,977
Telegraph and telephone materials.....		44,421		4,527
Dyes:				
Aniline.....		148,028		625,810
Indigo, artificial..... piculs..	17,634	478,840	8,514	442,217
Medicines.....		88,330		67,270
Paints and paint oil..... piculs..	355	3,735	497	51,683
Perfumery and cosmetics.....		12,600		49,818
Soaps and materials for making.....		46,597		23,226
Soda.....	7,973	16,593	1,822	12,822
Buttons..... gross..	17,061	6,727	35,142	12,279
Candles..... piculs..	286	3,203	926	17,730
Instruments, musical and scientific.....		28,496		16,067
Photographic materials.....		7,923		10,328
Postal parcels.....		63,131		57,677
Printing and lithographic materials.....		36,217		19,347
Toys and games.....		5,108		12,123
Umbrellas..... pieces..	176,668	74,615	115,690	67,552

In the following table are shown the quantity and value of the principal imports through the port of Yochow for the years 1913 and 1923:

Items	1913		1923	
	Quantity	Value	Quantity	Value
		<i>Haikwan taels</i>		<i>Haikwan taels</i>
Leather..... piculs..			447	21,082
Milk, condensed..... dozens..	1,075	1,642	2,985	6,512
Flour..... piculs..			228	1,138
Sugar..... do.....	7,269	39,808	86,273	805,508
Pepper..... do.....	40	806	1,788	25,437
Cigarettes..... thousands..	2,360	5,068	2,965	27,049
India-rubber products.....				1,231
Cotton piece goods:				
Shirtings..... pieces..	112,801	922,143	114,486	1,376,636
Sheetings..... do.....	1,070	114,811	17,980	108,144
Printed..... do.....	3,739	22,313	12,890	71,709
Dyed..... do.....	38,781	186,619	76,590	658,985
Drills..... do.....	10,148	39,050	49	291
Unenumerated.....		94,527		169,723
Cotton yarn..... piculs..	37,433	941,046	682	40,255
Cotton and woolen mixtures.....		18,866		28,199
Woolen goods.....		16,600		32,284
Bags of all kinds..... piculs..	260,900	37,436	21,266	1,949
Clothing.....		6,465		5,951
Paper.....		3,788		15,643
Sandalwood..... piculs..	27	264	642	8,298
Stationery.....		1,438		3,123
Glass windows..... boxes..	127	446	2,087	9,437
Lamps and lamp ware.....		4,185		10,779

Items	1913		1923	
	Quantity	Value	Quantity	Value
Oil:		<i>Haikwan taels</i>		<i>Haikwan taels</i>
Kerosene.....gallons..	902, 510	148, 104	2, 495, 245	787, 735
Lubricating.....do.....	103	28	1, 703	788
Lead, pigs and bars.....piculs..	7	50	589	5, 144
Iron and mild steel (all kinds).....do.....	1, 159	5, 391	3, 262	20, 975
Steel.....do.....	6	30	1, 075	5, 982
Clocks and watches.....pieces..	850	1, 100	723	2, 150
Enamelware.....do.....		1, 919		9, 577
Needles.....thousands..	5, 120	1, 024	40, 274	12, 438
Electrical materials and fittings.....do.....		93		12, 394
Machines, sewing, etc.....do.....		6, 006		4, 353
Dyes:				
Aniline.....do.....		7, 011		40, 286
Indigo, artificial.....piculs..	3, 360	478, 840	3, 936	220, 995
Medicines.....do.....		2, 630		10, 776
Paint and paint oils.....piculs..	4	32	74	1, 256
Perfumes and cosmetics.....do.....		95		11, 276
Soaps and materials for making.....do.....		2, 115		6, 766
Soda.....piculs..	1, 339	3, 006	899	2, 977
Buttons.....gross..	600	216	3, 362	1, 287
Candies.....piculs..	18	202	313	5, 501
Photographic materials.....do.....		114		3, 099
Postal parcels.....do.....		262		125
Stores, household.....do.....		10, 665		17, 549
Umbrellas.....pieces..	9, 240	3, 825	19, 376	10, 680

MONEY, BANKING, AND CREDIT

BANKS

There being no foreign banks in the district, foreign exchange must be handled through the banks in Shanghai or Hankow. A few modern Chinese banks have agencies in Changsha only to facilitate note redemption and remittances, but they do not finance trade. There are many private "native banks" making short-term loans at high interest, but a city of the size and importance of Changsha needs a sound modern bank.

LOCAL CURRENCY

The currencies mainly used in this district are "clean" Chinese silver dollars and light-weight double coppers, or 20-cash pieces. Large amounts of Hankow dollar bank notes are in circulation, particularly those issued by the Bank of China and Bank of Communications. Kwangtung 20-cent silver coins are common in southern Hunan, but are seldom used elsewhere. Other coins and silver sycee are very seldom met with. Only a few dollars, fractional and copper notes, are issued in Hunan by private institutions and chambers of commerce. Owing to past experiences with worthless paper currency the Hunanese are very loath to permit the issuance of irredeemable paper currency by the Government or any of its institutions. In Kweichow, however, fairly large amounts of notes have been forced on the people by the constantly shifting troops, with the result that *their* notes are greatly discounted.

Seasonal demands bring about marked changes in the amounts of silver dollars and dollar notes in circulation; an excess of provincial exports over imports creates a demand for ready money which must be met by its shipment from Hankow. This proves to be costly when transportation facilities are lacking or are insecure, as in times of low water and military disturbances. Again, excessive imports

or heavy up-country purchasing creates a demand for remittances on Shanghai and Hankow, which has even forced notes to a premium when silver shipments were difficult to make. Remittance charges to Shanghai are usually one-half of 1 per cent, but sometimes go as high as 3 or 5 per cent. Foreign-exchange fluctuations are not greatly felt, since most foreign trade is carried on through down-river ports, and much of the trade in and out of the district is only from or to other parts of the country.

CREDITS

No facilities exist for the financing of import or export trade, which is therefore required to seek such facilities from the foreign banks in Shanghai and Hankow, where branches of the larger firms exist. Within the district itself native drafts issued by the merchants on their representatives in other cities, as well as the actual transportation of money, are common forms of remittances. Native trade is financed by short personal loans payable the 1st and 15th of each moon.

ADVERTISING

Six daily newspapers with a combined circulation of 15,000, several educational and industrial monthly magazines, picture shows, free space for posters, and a population of ready and impressionable recipients of free samples and such novelties as calendars, caps, and fans offer ample opportunity to the firm or agency for bringing its wares to the attention of the local public. The two magazines meriting special mention are the Shih Yeh Tsa Chih, an industrial monthly, and the Kwang Yeh Tsa Chih, a mining monthly. The Hunanese are thorough readers of their papers and an attractive advertisement, in Chinese, of course, is a sure way of bringing foreign goods to the notice of the consumers.

The large amount of centrally located free wall space in Changsha and other cities renders the employment of posters an especially effective method of advertising.

TRADE ORGANIZATIONS

The chief trade organizations in this district are the Chinese chambers of commerce located in all the important cities and the British Chamber of Commerce in Changsha. Closely related to the chambers of commerce are the trade and provincial guilds, which are generally mutual aid societies receiving contributions from its members for the benefit of those in need. They stabilize trade and regulate its customs and practices.

TRAVEL FACILITIES

Changsha is best reached by one of the passenger steamers plying between that city and Hankow during the high-water season from April to November. The railway journey is tedious, uncomfortable, and lacking in the usually expected facilities for meals, heating, lighting, and sleeping arrangements.

Hotel accommodations in Changsha for foreigners leave much to be desired. Travelers, therefore, often prefer to lodge on board

ship while in port, if they are not so fortunate as to have friends in the city to whom they can go. Accommodations may be secured at the Changsha Hotel, the Tien Lou Chu, and the Italian Hotel, all under Chinese management.

PROPERTY VALUES AND RENTS

Desirable business locations at Changsha are expensive, especially for foreign firms. From \$1 to \$2 silver has been paid per square foot for land on the bund by foreign concerns. Office buildings containing eight rooms rent for \$250 silver per month. Warehouse rent depends upon several conditions, such as the type of the building, location, height above flood level, and rental period. The shipping companies charge about 1 tael per ton for storing ordinary merchandise. Foreign-style houses are seldom for rent, but when they can be secured, about \$150 must be paid per month for a medium-sized house. Even then plumbing and heating facilities are seldom supplied.

Except for taxes of 8 per cent of the value of the property levied when real estate is transferred, the only property taxes collected are certain police taxes, approximately equivalent to half a month rent collected semiannually. The cost of street improvements and lighting is shared by the adjacent occupants.

LIVING COSTS

Since there are no hotels or boarding houses catering to foreigners or at all suitable for them, it is practically essential for all permanent residents to keep house for themselves. Room and board may be occasionally secured for from \$60 to \$150 silver per month.

Club dues are but \$5 per month. There are no motor cars, but private rickshas are generally necessary. They cost about \$150 each and require a monthly expenditure of \$12 for maintenance. Tennis and pony riding afford practically the only recreation facilities at moderate costs. The education of children is a serious problem, the solution of which has been aided by the employment of a teacher for foreign children by the Yale Mission.

CHANGE IN TRADE CONDITIONS IN RECENT YEARS

The most significant change or development in trade conditions in the Changsha consular district during recent years has been the enlarged rôle which the United States plays in the commerce of the district. Because of America's large imports of raw products, such as wood oil, antimony, tungsten, arsenic, fireworks, and bristles, which were much less 10 years ago, it is Hunan's best customer. Ten years ago the products of the United States, excepting kerosene and machinery, were scarce in the district. To-day American dyes, electrical supplies, canned food products and flour, rubber goods, perfumery and cosmetics, and many other sundry manufactures occupy prominent places in the imports of the district.

Another turn which the trade has taken in recent years is the increased use of Chinese manufactured goods, such as textiles, soaps, utensils, cigarettes, and cheap manufactures imitating western products.

CHEFOO CONSULAR DISTRICT

By Vice Consul A. Grant Swaney

LOCATION AND AREA

The Chefoo consular district consists of the 12 hsien (counties) comprising the great Shantung Promontory, which extends north-westward from northern China, separating the Gulf of Chihli (Pechili) and the Yellow Sea. Its area is approximately 10,000 square miles, or slightly greater than that of Vermont. Lying between 36° 10' and 37° 50' N. latitude, it approximates the latitudinal belt of central California, but the climate is more nearly that of the New England States.

The rainfall for 1922 at Chefoo, which is situated on the northern coast of the district, was 31.46 inches. The rainy season occurs during the months of June, July, and August. The winters, although somewhat shorter than New England winters, are at times severely cold. Snowfalls are heaviest in late December and January. Chefoo had a mean monthly maximum temperature for 1922 of 80°, and a mean monthly minimum temperature of 25.3° F. The average maximum temperature was 62° F., and the average minimum temperature 48°. The district is subject to prolonged droughts and sudden floods, but the latter are not destructive of life and property as are the inundations of the low plain in the north central part of Shantung Province, in the Tsinan consular district.

PHYSICAL FEATURES

The Chefoo district in general is extremely rough and mountainous. Low hills along the seacoast give place farther back to mountain peaks, which are well over 3,000 feet high in the north central part of the promontory, where they form the north-south watershed. The north-flowing streams empty into the Gulf of Chihli and the south-flowing ones into the Yellow Sea.

In the southwestern section the mountains decrease in elevation, becoming low hills which gradually merge into a low plain subject to inundation, it being the drainage area of the rivers flowing almost due north, parallel to the course of the Yellow River, and emptying into the Gulf of Chihli.

There is almost a total absence of forests in the district, though there are growths of stunted oak and pine on the mountain ranges.

POPULATION

The population of the district is estimated at 4,039,342 (Chinese Post Office estimate, 1922), or about that of Texas. The population averages 404 to the square mile, or about equal to that of New

Jersey. The most densely populated regions are along the seacoast and the numerous small streams of the interior, where the natives more easily find a livelihood than in the mountainous regions.

CITIES

Chefoo has a population estimated at 90,000, but, as there is a large floating element, it is likely that during certain seasons the number falls far below that. In Chefoo reside about 700 foreigners, about 50 of whom are Americans. There are 149 American citizens in the consular district. The city covers an area of about 12 square miles, is under the direct administration of a Chinese territorial official (taoyin), and is policed by Chinese. A section of the town has been settled by foreigners for residential and business purposes, and although this area is under Chinese administration, such municipal matters as lighting, drainage, sanitation, and fire protection are in the hands of an international committee, composed equally of foreigners and Chinese.

Consulates are maintained by the United States, Great Britain, France, and Japan. In addition there are honorary acting consuls for the Netherlands, Norway, and Belgium, and an honorary acting vice consul for Sweden.

Chefoo was opened as a port in March, 1862, under the treaty of 1858 with Great Britain. Because of its situation on the northern end of the Shantung Promontory it is off the main trade routes and is served by coasting vessels from Shanghai and Tientsin. The only adequate transportation connections with the interior of the Province are by means of a motor road running to Weih sien, on the Kiaochow-Tsinan Railway. The natural harbor at Chefoo proving inadequate, a breakwater and other harbor works have been built, which now give Chefoo a harbor adequate to meet the demands made upon it. Chefoo is usually spoken of as an outpost of Shanghai, as most of the local trade is carried on through that port and nearly all shipments for abroad are transshipped from coasting vessels to the ocean freighters there.

Japan enjoys a naturally favorable geographic position in regard to the trade of this part of China, and there are convenient steamship communications between Chefoo, Dairen, and Chosen.

Lungkow was made an "open port" by the Chinese Government in November, 1915, as a result of the desires of the Japanese, the port having been used by them for the landing of their army in preparation for the attack upon Tsingtao. However, their interests have now waned to a great extent. Little use has been made of the pier and warehouses erected in 1919 and there is little prospect of any improvement in the near future. The population is about 5,900. Motor transport service operating between Chefoo and Weih sien has proved of much value to the town, which is on a branch line running from Hwanghsien. In the hinterland of Lungkow vermicelli is manufactured and shipped to southern China ports.

Laichow, a city of about 100,000 population, not open to foreign commerce, is in the extreme western part of the Chefoo consular district on the motor road to Weih sien, about 120 miles from Chefoo. There are not more than 15 foreigners residing in the city, 12 of whom are missionaries. The principal industries are the making of

straw braid, the making of talcum powder from soapstone, the weaving of cloth, and the making of thread, towels, and candles. As is the case in all other parts of this district, agriculture is carried on near the city, and the usual agricultural products are produced in large quantities.

Two large foreign oil companies—one American, the other British—have established distributing agencies in Laichow. No other foreign commercial interests are represented.

Weihaiwei is situated in the leased territory of Weihaiwei and does not properly come within the Chefoo consular district. The territory was leased to Great Britain under a convention signed July 1, 1898. The trade of the territory is not very extensive, but it is a popular summer resort, visited by foreigners from all parts of China and used as summer headquarters by the British China Squadron. According to the latest census there are 246 foreigners residing in Weihaiwei, including government officials, members of the naval detachment, and the small military detachment maintained there by Great Britain. The Chinese population of the leased territory is approximately 154,416.

AGRICULTURE

Northeastern Shantung is primarily an agricultural district. The majority of the natives are very poor and the landholdings are extremely small. In most cases the farms consist of a few mow (a mow is approximately $\frac{1}{6}$ of an English acre), and in many cases these small holdings support large families, though the standard of living is of necessity exceptionally low.

CROPS AND YIELDS

Small though the landholdings usually are, a variety of produce is grown. The principal crops are millet, beans, wheat, corn, peanuts, sweet potatoes, kaoliang (kafir corn), fruits, vegetables, tobacco, and some cotton in the southern part of the district. For the sericulture industry scrub-oak trees and mulberry bushes are grown. The fruits produced in northeastern Shantung are large and luscious, comprising apples, apricots, grapes, pears, plums, persimmons, and melons. Truck gardening has been extensively developed and the vegetables grown are of surprising size and quality.

The soil is poor, being extremely sandy along the seacoast, and the generous use of fertilizers is necessary. Bean cake and animal manure form the principal means of enrichment, the former being used more for cereal crops and the latter for truck gardens. There being no means of irrigation, occasional severe droughts sometimes cause much suffering as the wells, ponds, and small streams dry up. Prolonged rains also bring an occasional failure of the crops.

Considering the inferior quality of the soil and the number of years it has been tilled, the yield of the principal crops is somewhat surprising. Though no official statistics are obtainable, the following estimates of the yield per acre are believed accurate: Beans, 16 bushels; kaoliang, 31 bushels; corn, 24 bushels; cotton, 635 pounds; ginger, 5,000 pounds; hemp, 1,000 pounds; millet, 30 bushels; peanuts, 2,995 pounds; peas, 867 pounds; sesame, 798 pounds; sweet potatoes, 118 bushels; tobacco, 667 pounds; wheat, 19 bushels.

PEANUTS

Many years ago peanuts were introduced into Shantung Province by an American missionary, and on account of the adaptability of the soil and climate, they are now grown extensively throughout this district, forming one of the chief agricultural exports. Exportation of peanuts has been greatly facilitated since two shipping companies—one American, the other German—have included Chefoo in their ports of call in order to take direct freight to foreign countries. The Chefoo peanuts are much whiter and are believed superior in quality to those produced around Tsingtao or on the Yangtze.

Coast freight and transshipping expenses at Shanghai, however, added to the still more expensive mule transport from the interior to Chefoo, have so far acted as a drawback to the development of this industry.

TRADE IN AGRICULTURAL PRODUCTS

Through the port of Lungkow are exported fresh fruits, particularly to Dairen. In 1921, 825 short tons were exported, in 1922 the amount fell to 572 tons, but increased again in 1923 to 1,077 tons.

The following table shows the agricultural products exported through the port of Chefoo for these years:

Products	1921	1922	1923
Bean cake.....short tons..	10, 580	8, 057	6, 582
Beans and peas.....pounds..	365, 467	187, 864	51, 066
Eggs, fresh.....dozen.....	854, 949	405, 185	139, 024
Fruits:			
Fresl. pears.....pounds..	292, 133	702, 800	600, 933
Unclassified.....tons.....	7, 722	7, 124	5, 501
Peanuts:			
Unshelled.....do.....	6, 880	3, 789	5, 107
Shelled.....do.....	5, 303	5, 678	5, 497
Licorice.....do.....	787	465	510
Mats, rush and straw.....do.....	9, 188	5, 962	5, 737
Oil:			
Bean.....pounds..	435, 733	671, 733	818, 400
Peanut.....tons.....	759	800	1, 070
Sesamum seed.....pounds..	46, 800	48, 800	22, 000
Seed:			
Apricots.....do.....	279, 733	242, 400	234, 133
Melon.....do.....	571, 200	208, 933	280, 133
Straw-braid.....do.....	237, 733	210, 533	242, 933
Vegetables.....tons.....	2, 633	1, 936	1, 728
Wines and spirits (made in Chefoo).....dozen bottles..	19, 064	9, 002	9, 833

GRAPE CULTURE

For many years the propagation of wine grapes in the hinterland of Chefoo has been eminently successful, but the industry is still in its infancy. More detailed information concerning wine-making will be found under the discussion of manufacturing and industrial development.

LIVESTOCK

Cows, pigs, and goats are found in small numbers throughout the district, but so far as can be ascertained there are no herds of cattle, except perhaps in Hwanghsien and Penglaihien. In 1921, 2,420 cowhides were shipped through the native customs at Chefoo; in 1922, 1,756 hides; and in 1923, 3,681 hides. In 1923 pigskins

amounting to 38,933 pounds were exported from Lungkow. Chickens are kept by most of the native farmers, and the eggs produced are shipped to the principal cities of China and Manchuria.

AGRICULTURAL METHODS

No modern agricultural machinery is used in the district. A rough wooden plow, usually drawn by a donkey or mule, but often by a human being, is used to break the ground, which is subsequently worked over, foot by foot, with crude hand implements until properly prepared to receive the seed. All cultivation is done with hoes of a peculiar Chinese pattern.

Crops are harvested by hand. Grains are pulled up by the roots, bound in bundles and carried to the threshing floor, where the roots and about 6 inches of the stalk are cut off. The heads and greater part of the stalk are then placed upon the threshing floor and allowed to dry thoroughly. The kernels are threshed out either by means of a flail or a small, heavy iron (or stone) roller with a corrugated surface. The straw is then gathered and the grain swept up. Though the means are crude, the grain is thoroughly threshed. Chefoo farmers are too poor to indulge in modern methods and machinery.

There is no system of Government finance for the agricultural industry, and when in need of funds farmers are forced to seek the aid of private financial institutions, which grant such loans only at a very high rate of interest.

MINERALS AND MINING

Very meager information is obtainable concerning the minerals in this district. Deposits of lead were discovered in 1913, but mining operations have been carried on only within the last few years. The ore is galena. It was analyzed in Dairen and was reported to be of good quality, with evidences of silver. Small quantities of gold occur, but so far only the lead is being mined, and that in very small quantities. Only one lead mine is being worked. This mine is at Shi Shan Dzwang, Chishiahhsien, where the principal vein was approximately 1 foot wide at the outcrop. Smelting operations are carried on at the mine and the lead is transported out on mule back. The output is about 335 pounds per day. As lead does not enter into the export figures of either Chefoo or Lungkow, it is probably sold locally.

Labor is very cheap and plentiful in the Chefoo district, and the mining operations do not warrant the use of modern mining machinery. It is believed that under present conditions there is no market for such machinery.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

HAIR NETS

Chefoo is noted as one of the hair-net centers of the world; but, in reality, few nets are actually made in the city. The manufacture of hair nets is mainly a cottage industry, the major quantity being made by villagers in the interior in their own homes. It is a spare-hour occupation for the younger members of the family, the delicate

knots requiring keen eyesight. Itinerant buyers collect the nets and ship them to their principals in Chefoo, where they are inspected and prepared for shipment abroad.

Before the World War the hair, obtained principally from combings, was sent to Europe for preparation and then returned to China for manufacture. But the war transferred the preparation of the hair to the United States. At present much of the hair is prepared locally, not always with the best results.

The wholesale bobbing of women's hair in the United States and Europe has given the industry a serious setback. In 1921 hairnets were exported to the value of \$5,022,721; in 1922 such exports fell to a value of \$3,459,560, and in 1923 to \$2,323,978. Of the total nets exported in 1923, slightly less than 75 per cent went to the United States.

BOBBIN LACE

Another home industry which merits special mention is the manufacture of bobbin lace. As is usual with many of the industries of northeastern Shantung, its manufacture is not confined solely to the cities, but is carried on by the natives of the interior as a home industry. The completed pieces are bought by dealers in the cities and marketed. During the late war the quality of the laces deteriorated greatly, owing to the fact that the supply of best quality thread from Europe was cut off. The laces have now reached their former standard of perfection, but the value of the exports has decreased considerably since 1922. In 1923 the value of the lace exported was \$466,568, as against \$1,007,167 during the previous year.

SILK

Of major importance is the reeling of silk from Shantung and Manchurian cocoons. Shantung pongee is known the world over for its splendid appearance and fine wearing qualities.

The raw silk, or tussah, is produced by killing the chrysalis by perfectly dry heat. The cocoons are then stored away and before unreeling, they are first softened by being subjected to steam. Eight cocoons are usually unreeled at a time to make one thread, which under favorable conditions will attain a length of 1,000 yards. The hanks of thread are made up and sold under a particular chop, or trade-mark.

There is one cocoon guild in Chefoo known as the Chefoo Silk Manufacturers' Union, which, together with the Chefoo Silk Improvement Commission, is endeavoring to promote the production of more cocoons locally and thus discourage the importation of Manchurian cocoons. The comparatively small local supply of cocoons comes from Chihsiahsien, Haiyanghsien, Jungchenghsien and Chimohsien.

There are in Chefoo 33 silk filatures, with equipment varying from 212 to 616 hand looms. Every 100 reelers require 10 men for steaming, preparing the cocoons, and making the silk into hanks. There are also 29 silk honges.

The manufacturing of pongee is not confined solely to the cities of the district, but the industry is carried on in the interior wherever a few cocoons can be raised.

The weaving is done on crude handmade looms with bamboo teeth. A gum made from beans is used to stick the threads together. Not being a regulated industry, there is consequently a lack of uniformity in the widths and lengths of finished material. Finished pieces range in width from 17 to 43 inches, while the length varies from 16 to 50 yards, and the weight from 21 to 260 ounces. The average sizes are 18 to 20 inches in width and 20 yards in length; or 33 inches in width and 20, 30, and 50 yards long. There is a considerable range in weights, usually from 30 to 125 ounces. There is, however, a tendency toward standardization.

In some respects the outlook for the silk industry in the Chefoo district is not bright, because of the complacency of the Chinese filature owners in depending upon another section of the country for cocoons. Shantung has always obtained the bulk of necessary cocoons from Manchuria. Filatures in Chefoo have steadily decreased in number, while those in Manchuria and in Antung and vicinity have increased.

In 1921, 13,741,200 pounds of cocoons were imported into Chefoo, principally from Manchuria. In 1922 importations increased to 15,606,400 pounds, but in 1923 fell to 9,447,066 pounds. This marked decrease is attributed to several causes. During 1923 it was reported that there was a shortage of cocoons in Manchuria. The condition is also attributed, in part, to direct shipments from Manchuria to Japan, but the chief cause is undoubtedly the increase of silk filatures in Manchuria. Wild cocoons in the following quantities were imported through the native customs during the years indicated: In 1921, 8,304,800 pounds; 1922, 12,357,466 pounds; 1923, 10,273,066 pounds. During 1923 the inducement of higher pay caused an exodus of expert spinners from Chefoo to the Manchurian filatures, and the recruiting is still going on. This has resulted in the closing down of many Chefoo filatures for want of skilled labor and has automatically reduced the demand for cocoons.

During 1923 high prices, combined with unfavorable exchange, hindered the pongee trade; but the poor quality of the silk put on the market has probably added to the present bad condition of this important industry.

The advent into the Chefoo pongee industry of a factory with modern weaving machinery has created much interest. Although the weaving is perfect, the quality seems inferior to that of the handwoven material. The factory has a capacity of 40 to 50 pieces daily and its development will be closely watched by interested silk manufacturers and dealers in Chefoo.

PEANUT OIL

The production of peanuts has already been commented on in connection with agriculture. It remains only to be emphasized that this product is one of the chief agricultural exports of this district and that the culture of peanuts has been gradually expanding since being introduced many years ago. In 1923, 5,107 short tons of unshelled and 5,497 short tons of shelled nuts, making a total of 10,604 tons, were exported through the Maritime Customs. For 1923 the port of Chefoo ranked sixth in China in the quantity of peanuts exported,

being surpassed in this respect by Tsingtao, Shanghai, Nanking, Tientsin, and Dairen, in the order named.

With the construction of roads and the development of adequate transportation facilities (which factor will tend to cheapen the price of the peanuts produced in the interior and brought to Chefoo), there is no reason why the industry should not grow rapidly.

Another industry, the growth of which depends directly upon the expansion of the peanut-growing activities, is the extraction of oil from the nut. There are several mechanical presses for this purpose in Chefoo, but much of the work is done by hand. In 1923, 2,139,733 pounds of peanut oil were exported through the port of Chefoo.

BEAN CAKE AND OIL

The soy bean is extensively grown in northeastern Shantung, and the extraction of the oil ranks as one of the industries of importance. The by-product, bean cake, is used extensively in China as a fertilizer and is also utilized as cattle feed. In 1923, 6,582 tons of bean cake were exported through the port of Chefoo.

The oil is extracted both by hand and by machinery. Exportations have been increasing for the last three years, reaching 818,400 pounds in 1923. This increase may be partly explained by the poor harvest of cottonseed in the United States, though no direct shipments are recorded.

VERMICELLI

The manufacture of vermicelli in the vicinity of Chefoo and Lungkow has assumed greater proportions during the past few years. The product is made, both in factories and in the homes, from the flour of a small bean, which is usually harvested in September. The 1923 crop was bountiful, particularly in the vicinity of Lungkow, from which port 9,696 short tons were shipped during that year, principally to South China ports. As exportations from Lungkow have increased, the quantity shipped through the port of Chefoo have decreased slightly. The total quantity exported from the Chefoo consular district during 1923 was 18,913 short tons.

WINE

The growing of wine grapes in the vicinity of Chefoo was begun in about 1895 and their propagation has been steadily progressing since that time.

The capital invested in the wine industry is given as \$3,000,000 Mex. (\$1,500,000 United States) and the annual turnover from \$200,000 to \$300,000 Mex. (\$100,000 to \$150,000 United States).

In October, 1924, there were about 3,000 mow (approximately 500 English acres) of wine grapes under cultivation on East Hill and West Hill, in the immediate vicinity of Chefoo. From 650,000 to 800,000 pounds of wine grapes are produced annually. Extensive concrete wine cellars have been built below sea level, and the first wines were sold only after the industry had been in operation for about 10 years.

The wine produced in Chefoo is exported to Japan, Chosen (Korea), Philippine Islands, the Straits Settlements, and all the principal cities of China.

The manufacturers seem intent upon improving their product, and are reclaiming more land, planting more grapes, and studying conditions in connection with the marketing of the product.

DEEP-SEA FISHING

Deep-sea fishing is carried on in the waters off the Shantung Promontory, with Chefoo as one of the important bases for the curing of the catches and the preparing of the product for exportation.

There are no figures available as to the annual catch, but in view of the fact that great quantities are consumed by the Chinese and that 5,427 short tons of dried and salt fish were exported from Chefoo in 1923 (an increase of 1,421 tons over the previous year), it is believed that this industry is a far-reaching one.

In August, 1924, the fishermen of Chefoo formed an association to protect their mutual interests and to forestall the operation of fishing vessels of other nations in the waters off Shantung Promontory.

In 1923 cockles and clams to the amount of 317,600 pounds, and 756,667 pounds of prawns and shrimps were exported through the Maritime Customs from the Chefoo district to Manchurian and other Chinese ports.

LABOR CONDITIONS

Labor is both cheap and plentiful at all times in the Chefoo district, and as a result there is every year a migration of coolie labor to Manchuria. The average working day in most of the industries in Chefoo is 8 to 10 hours. In the hair-net industry, which employs mostly female labor, the daily wage is \$0.18 Mex. (\$0.09 United States.) Pongee weavers are usually paid \$5 Mex. (\$2.50 United States) per piece of 30 yards. Workers employed in the extraction of peanut oil receive \$12 Mex. (\$6 United States) per month; those employed in the local wine industry are paid \$15 Mex. (\$7.50 United States) per month. As most of the other industries of the district are the so-called home industries, where no wages are paid, as such, it is impossible to give any figures for the remuneration of the workers.

It is impossible to estimate fairly the efficiency of Chinese labor. With the exception of agriculture there are in this district no industries sufficiently similar to industries in the United States to permit a comparison of the relative labor turnover.

TRANSPORTATION AND COMMUNICATION

TRANSPORTATION

There are no navigable waterways and no railways in the Chefoo consular district. There is a Government-owned road about 200 miles in length, running from Chefoo to Weih sien on the Kiaochow-Tsinan Railway, which is graded as a railway bed. In the latter part of 1923 this highway was leased for a period of 10 years by the Ministry of Communications, on behalf of the Chinese Government,

to the Chefoo-Weihsien Motor Road Co. (Ltd.). In 1924 this company had under operation passenger, freight, and mail service by motor car between the Kiaochow-Tsinan Railway to Weihsien and Chefoo.

Railway connections between these two cities are greatly needed at present in order to open up Chefoo and the intervening country more extensively to commerce and trade.

The Chefoo-Weihsien Motor Co. (Ltd.) operates approximately 50 motor cars, passenger and freight, between the two cities. The trip of about 200 miles is usually made in 9 hours. First-class fare is \$12 Mex. (\$6 United States). Freight rates are exceedingly high, being 90 cents Mex. per 10 catties (\$0.45 United States per 13.33 pounds), or 3½ cents gold per pound.

Owing to the lack of navigable waterways, railroads, and properly constructed highways, the bulk of goods transported to and from the interior is carried on mules, donkeys, and by coolie carriers and wheelbarrows. The Shantung wheelbarrow—consisting of a heavy wheel about 3 feet high with side racks for goods—is the common means of transportation for heavy goods. A strong coolie is capable of wheeling 600 pounds 15 miles in a day over beaten tracks.

There is little uniformity in the transportation charges in the Chefoo district, but it is believed that the following figures give the average costs:

Type of carrier	Average load	Mileage per day	Charge (United States currency)
Motor car (Chefoo to Weihsien only).....	Any load.....	200	\$0.45 per 13.3 pounds. ¹
Mule.....	320 pounds.....	30	1.00 per day.
Donkey.....	160 pounds.....	30	0.75 per day.
Wheelbarrow.....	667 pounds.....	15	.50 per day.
Coolie carrier.....	107 pounds.....	30	.75 per day.

¹ There is no reduction in tariff for long distance or quantity of hauling.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

Adequate cable communications are maintained with the world through Shanghai and Tientsin, and also with other parts of China by the land lines of the Chinese Telegraph Administration, which is under the jurisdiction of the Ministry of Communications.

Two cable companies, the Great Northern and the Eastern Extension, operate the cables of the Chinese Telegraph Administration as the Submarine Telegraph Service. There are 2 cables to Tientsin, 1 to Weihaiwei, 1 to Tsingtao, 1 to Shanghai, and 1 to Dairen (formerly owned by the Russian Government but taken over by Japan after the Russo-Japanese War).

Situated about 2 miles west of Chefoo there is a wireless station, which is also owned by the Chinese Government; but it is little used, if at all, for commercial messages. It has a wave length of 600, 1,200, and 1,600 meters and a sending radius of 650 miles by day and 1,200 miles by night. It maintains communication with Peking, Tsingtao, Woosung, and Foochow, and with ships at sea.

TELEPHONES

Chefoo has the only telephone system in the consular district. It is operated by the Chinese Government Telephone Administration. Official statistics for July, 1924, are as follows:

Number of centrals-----	1
Number of telephones-----	782
Miles of wire (all local)-----	63
Telephone conversations per day-----	13,200
Investment in plant (Mex. currency)-----	\$134,000
Gross monthly revenue (Mex.)-----	\$3,000

The original telephones installed were manual type, of Norwegian manufacture. Supplies and repair parts now come from Japan.

POSTAL FACILITIES

There are no foreign post offices operating in the Chefoo consular district, but adequate and efficient postal services are maintained by the Chinese Postal Administration. Parcel-post facilities between the United States and this district operate smoothly. In 1923 parcels numbering 71,000 weighing 771,610 pounds, and valued at \$3,000,000, were sent out from the Chefoo post office. Under normal conditions first-class mail matter from New York is in transit from 27 to 35 days. The regular international postal rates apply to all mail.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

There are no facilities for docking at the port of Chefoo. Coastwise and deep-sea vessels anchor in the "inner harbor" about one-half mile from the wharves. The depth on entering the harbor is 20 feet at lowest water, and at high water in the summer, between 27 and 30 feet. At highest water in the winter the depth is 26 feet. The inner harbor, where foreign-type ships usually anchor, has an average depth of 20 feet.

There is one 600-foot pier, but it has not yet been opened for public use. All cargo is transferred to shore by means of lighters of up to 20 tons' capacity.

Imports consigned to the interior usually have to be repacked to suit the mode of transportation to be employed, all goods being carried on mules or donkeys, by coolie carriers, or on wheelbarrows. Shipments consigned to cities and villages along the Chefoo and Weihsen road, however, are often conveyed by motor car.

Coastwise vessels and most of the deep-sea ships calling at Chefoo are able to anchor in the inner harbor, which has an average minimum depth of 20 feet. No mechanical devices of any kind are available for handling cargo, all such work being done by coolie labor and by means of lighters. Cargo can be discharged at the rate of about 100 tons per hour.

The cost per ton of transporting cargo from ship's tackle to the docks depends entirely upon the class of cargo.

STORAGE FACILITIES

Warehouse facilities at Chefoo are limited. Most of the large commercial companies have private godowns (warehouses). The buildings are constructed of brick, stone, and concrete, and are quite modern. When not in use by the owners, space may be obtained from them for temporary storage. The charges vary greatly according to the class of goods.

The lack of suitable public or customs warehouses is one of the drawbacks in handling cargo at this port. Goods discharged from the lighters are usually piled on the customs jetty and often remain exposed for days, or until such time as the owner passes them through the customs. In inclement weather the goods are covered with straw mats, which afford fairly adequate protection.

All importers are allowed to use the customs jetty, but it is the general rule that goods are not to remain longer than three days. If not removed within this period the shipper is subject to the payment of wharfage dues of 1 copper per piece each day until the shipment is removed. In the case of bulky goods this charge is increased and sometimes amounts to as much as 15 cents Mex. (\$0.075 United States) per piece per day.

PUBLIC WORKS AND UTILITIES

ELECTRIC LIGHT PLANTS

Chefoo's electric plant was installed under the supervision of Japanese engineers, the equipment being supplied by Japan. The system carries a kilowatt lighting load of 100, and a kilowatt power load of 200. Rates for lighting service are of two kinds—a fixed monthly basis and a meter basis. The rate per lamp (vacuum bulb) per month, under the flat rate, varies from \$0.90 Mexican for a 10-candlepower lamp to \$2.50 Mex. for a 50-candlepower lamp. For gas-filled half-watt bulbs, the rate is slightly higher in proportion to the candlepower.

Meter rates are \$0.35 Mex. per kilowatt hour. Meter rent is \$0.50 Mex. per meter per month. The minimum charge for lamps installed is \$0.50 Mex. per month. The service is quite adequate to meet the demands made upon it.

There are also small lighting plants at the ports of Lungkow and at Tengchowfu.

WATERWORKS

There are no waterworks in any of the cities in the Chefoo consular district. Water is obtained from wells—usually on the premises, in the case of foreigners. Only distilled water, or, at least, water that has been previously boiled, is used by foreign residents.

HARBOR IMPROVEMENT

The harbor of Chefoo is not naturally well protected. In order to afford adequate protection for ships at anchor, it was found necessary to construct a mole on the west side and a breakwater to the northeast. The two entrances are now amply protected, but owing to gradual silting up of the harbor in many places dredging has be-

come necessary. A grab-type dredge has been ordered by the Chefoo Harbor Improvement Commission for use in this work. It is estimated that 1,000,000 cubic yards of silt will have to be removed to put the harbor in proper condition.

The work is to be paid for from the funds of the Chefoo Harbor Improvement Commission, which are obtained by the assessment and collection of a breakwater surtax of 7½ per cent of the regular 5 per cent customs import and export duties. All harbor improvements are paid for in this manner.

EXPORT AND IMPORT TRADE

The table below gives the total imports and exports, foreign and Chinese, through the Maritime Customs at Chefoo during the years indicated:

Items	1913	1923
Imports of foreign goods:		
From foreign countries and Hongkong.....	\$3,804,685	\$4,329,038
From Chinese ports.....	3,747,283	4,668,336
Total foreign imports.....	7,551,968	8,997,374
Reexports of foreign goods:		
To foreign countries and Hongkong.....	301,570	1,205,874
To Chinese ports.....	749,728	2,078,562
Total foreign reexports.....	1,051,298	3,284,436
Net total foreign imports.....	6,500,670	5,712,938
Imports of Chinese products.....	7,607,467	14,504,244
Reexports of Chinese products:		
To foreign countries.....	761,323	1,484,718
To Chinese ports.....	603,306	1,492,949
Total native reexports.....	1,364,629	2,977,665
Net total native imports.....	6,242,838	11,526,579
Exports of Chinese products of local origin:		
To foreign countries and Hongkong.....	2,666,421	5,839,096
To Chinese ports.....	7,688,164	12,540,705
Total exports of local origin.....	10,354,585	18,379,801
Gross value of the trade of the port.....	25,514,020	41,881,419
Net value of the trade of the port.....	23,098,093	35,619,318

From the foregoing table it is apparent that the trade of Chefoo has been continually increasing, a gain over \$12,000,000 occurring between 1913 and 1923.

Before the construction of the Shantung Railway, in 1904, Chefoo was the most important port in Shantung Province, and its trade far exceeded that of its nearest competitor; but since the advent of the railway from Tsingtao to Tsinan and the building of the Tientsin-Pukow Railway, which was completed in 1912, Tsingtao has rapidly outgrown Chefoo as a port, because of the superior distribution facilities made available by the railway connections with the interior. Goods destined for the interior of Shantung Province, which formerly came through Chefoo, may now be most expeditiously sent by rail through Tsingtao, Shanghai, or even Tientsin. In spite of the drawback of inadequate connections with the interior, Chefoo

has held its own as a port from year to year, but its future development depends almost entirely upon the construction of a railway to Weih sien on the Kiaochow-Tsinan line.

EXPORTS FROM CHEFOO

The following table shows the principal native products exported through the port of Chefoo during 1913 and 1923:

Articles	1913		1923	
	Quantity	Value in United States currency	Quantity	Value in United States currency
Animals, live.....head.....	5, 794	\$4, 947	1	\$22
Bags (all kinds).....number.....	183, 618	13, 978	55, 310	21, 835
Bean cake.....tons.....	19, 611	488, 823	6, 582	213, 259
Beans.....do.....	123	4, 456	25	878
Bones.....do.....	163	2, 265	300	4, 728
China ware, earthenware, and pottery.....do.....	22	3, 607	-----	3, 724
Cereals.....do.....	44	1, 896	-----	82
Clothing, Chinese, boots and shoes.....	-----	115, 030	-----	145, 460
Dates.....tons.....	-----	-----	435	28, 426
Eggs, fresh and preserved.....dozen.....	515, 121	39, 775	139, 020	16, 814
Fruits, dried and preserved.....do.....	1, 400	81, 346	-----	-----
Fruits, fresh.....do.....	-----	36, 979	-----	5, 003
Fish and fishery products.....do.....	4, 655	315, 168	4, 610	614, 180
Ginseng.....pounds.....	-----	-----	-----	-----
Groundnuts (peanuts).....tons.....	11, 460	655, 404	10, 604	714, 950
Hair nets.....	-----	-----	-----	2, 323, 978
Joss sticks.....pounds.....	28, 000	3, 118	-----	3, 752
Lace, embroideries, etc.....	-----	-----	-----	533, 220
Licorice.....tons.....	922	93, 619	510	47, 760
Mats.....number.....	112, 697	7, 343	86, 030	14, 177
Medicines.....	-----	71, 739	-----	114, 648
Nankeens.....pieces.....	884	30, 512	1 61, 466	20, 948
Oil:	-----	-----	-----	-----
Bean.....tons.....	482	50, 136	409	54, 504
Peanut.....do.....	14	2, 242	1, 069	157, 912
Vegetable and other.....do.....	96	14, 905	-----	-----
Paper, all kinds.....do.....	51	9, 299	-----	17, 798
Salt.....do.....	-----	-----	-----	304, 210
Seeds, all kinds.....do.....	758	81, 607	257	37, 992
Silk, raw (all kinds).....do.....	829	2, 791, 303	-----	4, 862, 306
Silk waste.....do.....	87	727, 878	505	441, 532
Silk piece goods.....pounds.....	6, 000	24, 140	-----	44, 070
Silk pongees.....tons.....	427	2, 137, 467	663	5, 748, 005
Straw braid.....do.....	-----	-----	121	171, 292
Vegetables (all kinds).....do.....	1, 024	21, 153	1, 226	44, 375
Vermicelli and macaroni.....do.....	16, 259	2, 141, 640	8, 802	1, 066, 924
Postal parcels not otherwise classified.....	-----	15, 776	-----	37, 012
Sundries, unenumerated.....	-----	-----	-----	121, 308
All other articles.....	-----	357, 034	-----	442, 717
Total.....	-----	10, 354, 585	-----	18, 379, 801

¹ Pounds.

The distribution of the above exports was as follows: In 1913, \$2,666,421 to foreign countries and Hongkong, and \$7,688,164 to Chinese ports; in 1923, \$5,839,096 to foreign countries and Hongkong, and \$12,540,705 to Chinese ports.

The most notable growth in the exports of Chefoo during the past 20 years has been in the exportation of hair nets. No nets were made in 1903, nor were any declared in the Maritime Customs returns in 1913; in 1921, however, exports of hair nets exceeded a value of \$5,000,000. This was the peak, as such exports have since declined, owing to the new fashions in dressing women's hair.

Raw silk exports also practically doubled in the 10-year period, 1913-1923. Raw silk to the value of \$2,791,303 was exported in 1913,

and to the value of \$4,862,306 in the latter year. Exports of pongee silks have also greatly increased—from slightly over \$2,137,467 in 1913 to \$5,748,005 in 1923.

The exports of lace goods and embroideries show an even greater percentage growth. This industry was apparently developed by the demand in the United States during the war, primarily because the supply of such articles from Belgium and France had been cut off.

In the 20-year period, however, certain exports declined. The exports of live animals, for example, decreased by nearly \$400,000, and the 1923 exports of bean cake were less by \$1,000,000 as compared with 1923. These decreases were probably due in the case of cattle to the superior export facilities offered by the port of Tsingtao, and in the case of bean cake to the increased production in Manchuria, which went out by way of Dairen. It is also probable that railway shipments from the interior of Shantung were made to Shanghai and Tientsin, and thence shipped abroad.

The total value of goods exported to foreign countries in 1913 was \$10,354,585, or an increase of \$1,704,731 over the 1903 exports. In 1923 the total foreign exports amounted to \$18,379,801, an increase of \$8,025,216 over 1913 and \$9,729,947 over 1903 exports.

EXPORTS FROM LUNGKOW

This port was not opened to foreign trade by the Chinese Government until late in 1915, and 1916 was therefore the first full year in which Lungkow was engaged in foreign trade. The total value of its exports to foreign countries in 1916 was a little over \$360,000, which was increased in 1923 to a total of \$1,970,229, or a gain of over 500 per cent.

Vermicelli, however, is the only commodity of particular importance exported through Lungkow. In 1916 the shipments of this product amounted to \$117,868; seven years later, in 1923, the value had increased to \$1,628,961, or about five-tenths of the entire export trade of the port. South China ports take the bulk of the vermicelli shipments from Lungkow.

IMPORTS THROUGH CHEFOO

The following table shows the quantity and value of imports through Chefoo, from foreign countries and through Hongkong and Chinese ports, 1913 and 1923:

Articles	1913		1923	
	Quantity	Value in United States currency	Quantity	Value in United States currency
Bags (all kinds).....number.....		\$12, 208		\$30, 856
Brass and yellow metal.....tons.....	17	5, 746		6, 707
Cigarettes.....thousands.....	30, 863	45, 510	33, 376	72, 868
Cigars.....do.....	171	1, 460	220	6, 897
Coal.....tons.....	3, 968	244, 425	1, 972	13, 136
Colors, dyes and paints:				
Aniline.....		66, 051		69, 343
Indigo, artificial.....pounds.....	534, 533	82, 609	708, 800	196, 131
Paints and paint oil.....do.....	431, 600	22, 423	270, 400	19, 420
Other kinds.....do.....	594, 000	25, 114	888, 400	45, 437
Copper (all kinds).....tons.....	6	2, 325	2	901

Articles	1913		1923	
	Quantity	Value in United States currency	Quantity	Value in United States currency
Cotton goods:				
Blankets.....number.....	18,864	\$6,271		\$9,378
Cambries, lawns and muslins.....pieces.....	21,416	12,376	12,496	23,764
Cotton prints.....do.....	53,835	98,021	39,829	149,794
Drills.....do.....	26,841	78,028	978	4,559
Dyed lastings, italians, poplins, and venetians.....number.....	79,853	268,590	43,347	334,771
Flannelettes, dyed and printed.....do.....	10,358	24,983	5,692	34,582
Japanese cloth and crêpe.....yards.....	653,945	9,548	11,680	817
Jeans.....pieces.....	68,872	173,280	22,730	104,735
Sheeting, gray, plain.....do.....	255,121	710,215	3,573	17,581
Shirting, gray, plain.....do.....	35,480	75,390	44,663	205,602
Shirting and sheeting dyed, plain and figured.....do.....	942	3,076	170	909
Shirting, white.....do.....	95,870	292,889	51,253	326,682
Thread (balls).....pounds.....	14,933	6,894	20,133	26,326
Velvets and velveteen.....yards.....	82,190	18,069	37,712	17,945
Yarns.....tons.....	3,595	928,807	203	142,726
Fish and fishery products.....do.....	135	19,798	270	70,003
Flour.....barrels.....	73,032	297,808	106,126	739,182
Glass, window.....boxes.....	4,317	11,061	4,956	20,494
Iron and mild steel, new:				
Bars.....tons.....	537	20,204	191	8,992
Nail rods.....do.....	348	12,332		
Nails and rivets.....do.....	457	26,284	491	44,300
Iron and mild steel, old.....tons.....	5,064	114,389	6,109	172,604
Leather.....pounds.....	124,400	32,361	226,033	59,329
Looking glasses and mirrors.....pounds.....		9,620		10,420
Oil:				
Kerosene.....gallons.....	51,450	17,823	1,076,615	245,102
Lubricating and vegetable.....do.....	12,185	6,370	36,427	18,239
Paper (including cardboard).....tons.....		95,885		83,408
Pepper, black and white.....do.....	77	16,669	103	15,492
Soda.....tons.....	1,101	28,529	1,346	28,934
Soap, laundry and toilet.....do.....		26,434		19,023
Sugar, including sugar candy.....tons.....	8,724	515,111	9,587	928,054
Woolen and cotton mixtures.....do.....		7,948		12,370
Woolen goods:				
Blankets and rugs.....pounds.....	44,568	10,766	4,313	1,708
Lastings.....pieces.....	620	5,635	20	315
Long ells.....do.....	83	3,599	120	1,026
Yarn and cords.....pounds.....	187	13,766	108	13,070
All other.....do.....		6,369		9,770
Postal parcels not otherwise classified.....do.....		28,494		26,131
All other.....do.....		3,010,475		4,607,541
Total.....		7,551,968		8,997,374
SUMMARY				
Imports from foreign countries and Hongkong.....		3,804,685		4,329,038
Imports from Chinese ports.....		3,747,283		4,668,336
Total imports.....		7,551,968		8,997,374
Reexports to foreign countries and Hongkong.....		301,570		1,205,874
Reexports to Chinese ports.....		749,728		2,078,562
Total net imports.....		6,500,670		5,712,938

The foregoing table reveals that the imports through the port of Chefoo have fallen off almost a million dollars in the 10 years from 1913 to 1923.

The reason for such a decrease has already been referred to; namely, the development of the Kiaochow region, and the port of Tsingtao, and the building of railways into the interior of Shantung Province. Goods destined for the interior (except for the north-eastern part of the Province) are now imported to Tsingtao, Shanghai, or Tientsin, and then shipped by rail to their destination; whereas, in earlier years, much of the importing for large areas of the Province was done through Chefoo.

There has been a decided increase in the value of artificial indigo imported, and a noticeable falling off in the value of cotton-goods imports, particularly in sheetings and yarns.

Considerable increase, however, can be seen in the value of flour imported in 1923 as compared with 1913.

A substantial decrease has taken place in the importation of kerosene. This may be accounted for by the establishment of additional distributing stations in the interior and the making of shipments by rail.

IMPORTS THROUGH LUNGKOW

The following table shows the principal net imports through Lungkow from foreign countries and Chinese ports for the years 1916 and 1923. As has been noted before, Lungkow was not opened to foreign trade until late in 1915.

Articles	1916		1923	
	Quantity	Value in United States currency	Quantity	Value in United States currency
Candles (all kinds).....pounds.....			14,933	\$1,280
Cereals: Rice and paddy.....tons.....			25	1,524
China-ware, coarse and fine.....				1,774
Cigarettes.....thousand.....	3,967	\$12,619	6,850	12,229
Clocks and watches.....number.....			828	2,160
Clothing, hats, etc.....		3,457		6,754
Cotton yarn.....pounds.....	927,866	137,143	209,600	59,468
Cottons, dyed, plain, and colored:				
Italians.....pieces.....			205	1,160
Venetians.....do.....			134	1,026
Lastings.....do.....			759	4,726
Cottons, dyed, figured: Poplins.....do.....			195	1,764
Cotton prints, plain.....do.....			6,918	25,728
Cotton, Turkey red and dyed T cloths.....do.....	2,435	4,443	2,686	11,116
Cotton jeans.....do.....	2,850	6,464	855	3,553
Dyes, colors, and paints:				
Aniline.....				8,032
Indigo, artificial.....tons.....			64	32,213
Unclassed.....pounds.....			13,200	1,311
Paints and paint oil.....tons.....			17	2,536
Electrical material and fittings.....				1,150
Enameled ware.....				3,390
Fish and fishery products.....tons.....	37	2,255	33	2,042
Flour.....do.....			629	30,736
Fruits, fresh.....do.....	72	3,179	29	1,587
Flannelettes, plain, dyed, and printed.....pieces.....	510	1,486	415	2,597
Hides and skins, undressed.....pounds.....			19,866	1,248
Iron and mild steel, new:				
Bars.....tons.....			58	2,312
Nails and rivets.....do.....			45	3,781
Unenumerated.....do.....			70	3,716
Iron and mild steel, old.....do.....			401	10,493
Iron, galvanized sheets.....do.....			93	9,034
Japanese cotton cloth.....yards.....	538,824	23,256		
Lamps and lampware.....				2,788
Looking glasses and mirrors.....		1,978		3,806
Machinery, propelling (boilers and turbines).....		1,580		9,660
Mats (all kinds).....pieces.....			29,362	1,238
Matches.....gross.....	92,750	21,249	15,467	2,536
Oil:				
Kerosene.....American gallons.....	68,645	8,846	366,645	93,307
Lubricating.....gallons.....			10,275	4,282
Paper, including cardboard.....tons.....	15	1,380	62	7,360
Perfumery and cosmetics.....				3,453
Soda.....tons.....			339	10,280
Spirits of wine.....gallons.....			16,303	7,369
Shirting:				
Gray, plain.....pieces.....	1,321	3,799	2,005	8,564
White, plain.....do.....			1,503	7,596
Sundries, unenumerated.....				10,792
Seaweed and agar-agar.....pounds.....			195,733	4,590
Sheeting, gray, plain.....pieces.....	20,412	54,205	233	946
Soap.....		1,581		2,784

Articles	1916		1923	
	Quantity	Value in United States currency	Quantity	Value in United States currency
Sugar:				
Brown.....tons.....	122	\$7,471	354	\$29,719
White.....do.....	336	27,852	613	59,824
Refined.....do.....	90	10,743	547	57,103
Candy.....pounds.....	35,466	1,891	102,533	6,463
Toys and games.....				1,697
Vehicles, motor cars.....				3,865
Wax, paraffin.....				1,010
All other articles.....		35,133		33,485
Total.....		372,010		627,957
SUMMARY				
Imported from foreign countries and Hongkong				17,800
Imported from Chinese ports.....		372,010		610,157
Total foreign imports.....		372,010		627,957
Reexported to Chinese ports.....				2,020
Net total foreign imports.....		372,010		625,937

It is evident from the foregoing statistics showing the imports into Lungkow, that there has been a decided increase since the opening of the port in 1915. The only items imported during 1923 which showed any material decrease as compared with the value of importations in 1916 are cotton yarn, Japanese cotton cloth, matches, and cotton sheeting.

The total import trade for 1923 shows a gain of \$253,927 over the 1916 imports, or an increase of about 68 per cent.

MONEY, BANKING, AND CREDIT

BANKS

There are three banks in Chefoo which handle foreign exchange and bills. The Hongkong and Shanghai Banking Corporation is a British institution with extensive branches for foreign trade throughout China. The second, the Russo-Asiatic Bank, is now under French direction, with its head office in Paris. The third, the Shanghai Commercial and Savings Bank, a Chinese institution, with head office in Shanghai, also does foreign banking and exchange business.

LOCAL CURRENCY

The coins in circulation throughout the Chefoo consular district are the usual copper and silver pieces known as "small money." Mexican silver dollars, Hongkong trade dollars, Chinese Yuan Shih-kai and Peiyang dollars constitute "big dollars." In many places in the interior the Peiyang and the Yuan Shih-kai dollar only are accepted without discount. Shantung taels (representing a definite weight of silver) form the basis of business transactions.

CREDITS

Foreign-exchange business in Chefoo is usually transacted under letter of credit and payment against documents through banks.

Owing to the almost constant fluctuations in the value of silver it is safest to quote prices in United States gold currency, unless the order is accepted by cable and the rate of exchange fixed.

The comprador plays an important part in all business transactions involving local foreign firms. In the important firms he is usually a man of considerable wealth and guarantees all the transactions of his house with the native Chinese.

MERCHANDISING METHODS

Trade catalogues, unless printed in the Chinese language, are of little use for distribution to the ordinary Chinese firms.

Local merchants are seldom in a position to place large direct import orders and usually depend for their immediate requirements upon stocks carried in Shanghai and Tientsin. American firms entering the North China market have found it most advantageous to establish branches or connections in one of the larger ports, and later to extend their connections to the outposts, with native agencies in the interior.

ADVERTISING

The following table adequately portrays the limited circulation and cheapness of advertising in the newspapers published in Chefoo, both Chinese and foreign:

Name	Date established	Estimated circulation	Advertising rate per word ¹ per day (United States currency)
AI Kuo Pao.....	1919	2,300	\$0.0025
Sin Pao.....	1922	600	.005
Chung Shing Pao.....	1913	3,300	.005
Chiao Tung Pao.....	1915	2,600	.005
Chefoo Jin Pao.....	1912	5,900	.006
Chefoo Shang Pao.....	1914	3,400	.006
Ta Min Pao.....	1921	800	.0035
Chefoo Daily News.....	1924	180	¹ 1.50

¹ Chefoo Daily News, \$1.50 per column inch.

NOTE.—All the papers listed above are published daily; all are Chinese-owned and published in the Chinese language, excepting the Chefoo Daily News, which is British-owned and is published in English.

TRADE ORGANIZATIONS

There are two foreign chambers of commerce in Chefoo, namely, Chefoo General Chamber of Commerce, of an international character, and the British Chamber of Commerce. These organizations undertake to be of service to their members by the periodical compilation of trade statistics, and by summarizing and analyzing trade and market conditions affecting their members. Trade disputes are also arbitrated by the Chefoo General Chamber of Commerce.

There is a Chinese chamber of commerce in Chefoo which works in cooperation with other chambers throughout Shantung and China for the facilitation of commerce and commercial activities.

Guilds exist in most of the trades. They are usually local organizations and are not associated with similar guilds in other cities, except that sometimes branches of a guild may exist in the neighboring towns and villages. The guilds are of a permanent character, and officers are elective. They concern themselves mainly with the commercial interests, individual and collective, of their members, and, in addition, settle trade disputes and enact trade legislation. In some communities the guilds establish standards of weights and measures, fix the rates of commissions, determine settling days, and generally see that business is conducted honestly.

TRAVEL FACILITIES

During the summer months coastwise steamers en route to Tientsin and Shanghai call at Chefoo almost daily, and also touch at Weihaiwei. There are weekly sailings to Tsingtao direct and also weekly connections with Dairen, Manchuria, by Japanese steamers. It is possible to reach Tientsin and Shanghai by land, leaving Chefoo on the motor busses of the Chefoo-Weihsien Motor Road Co. (Ltd.) and transferring to the Kiaochow-Tsinan line at Weihsien and again changing to the express trains of the Tientsin-Pukow Railway at Tsinan. The motor cars cover the distance of about 200 miles in 9 hours, leaving each terminal daily.

HOTELS

There are two hotels in Chefoo where commercial travelers may reside in a reasonable degree of comfort—the Astor House and The Broadway. Both hotels are conducted on the American plan. There are no regularly established boarding houses in Chefoo, although in the summer many of the local residents offer accommodations.

There is one small hotel at Weihaiwei, but none at the port of Lungkow.

LIVING COSTS

Hotel board and room, depending somewhat upon the season of the year, ranges from \$150 to \$200 Mex. (\$75 to \$100 United States) a month for one person; for a married couple without children, from \$275 to \$375 Mex. per month, and for a married couple with two children, from \$400 to \$480 Mex. depending upon the age of the children.

PROPERTY VALUES AND RENTS

Land values have increased in the last few years, owing to the enhanced importance of Chefoo as a port, following the construction of modern harbor works and the growth of the hair-net industry. The war caused the shifting of the hair-net industry to China, and large sums of money were invested in Chefoo in factories and the necessary equipment. This brought an influx of workers, and property values and rents rose to a high level. Since early in 1923 there has been a slight downward trend on account of the falling off of trade in the products of various industries.

First-class land for commercial purposes in Chefoo is worth (in terms of Mexican currency) \$6,000 per mow; second-class land, about \$4,000 per mow; and third-class land about \$2,000 per mow (6.6 Chinese mow equal 1 English acre).

It is estimated that a Chinese building for commercial purposes can be built for \$120 (Mex.) per "chien" (room). The estimated cost for the erection of an ordinary foreign-style building is \$650 (Mex.) per "chien." In most cases rent, either for commercial premises or for residences, is fixed at about 10 per cent of the value of the property.

In "Section One" of Chefoo, the international settlement, taxes are levied and assessed at the rate of 7 per cent of the value of the premises. In other sections of the city taxes are levied at the rate of 3 per cent of the rent paid.

CHUNGKING CONSULAR DISTRICT

By Vice Consul R. L. Smyth

LOCATION AND AREA

Chungking consular district comprises the Province of Szechwan and all of Tibet (considered separately at end of this section) except the Kokonor region. The Province of Szechwan lies in western China between 26° and 34° north latitude—corresponding to that of Texas—and 98° and 110° east longitude. Beyond its western border lies Tibet, which, excluding the Kokonor region, extends from 28° to 36° north latitude and 79° to 98° east longitude.

The area of Szechwan is 218,533 square miles and of Tibet 463,320 square miles, a total for the district of 681,853 square miles, or about three-fifths the area of the United States east of the Mississippi River.

CLIMATE

Western Szechwan is dry, the winters cold and summers warm. Eastern Szechwan generally is mild, with rapid changes in temperature, much fog, and a sky usually overcast. In the Chengtu Plain the temperature rarely exceeds 100° F. Summer is the rainy season.

The climate along the Yangtze River is semitropical. At Chungking the average minimum temperature is about 35° and the average maximum temperature 106° F. The summers are hot and the humidity extreme. During autumn and winter the sun rarely appears through the blue-gray vapor that obscures the sky. The average rainfall is about 50 inches. The climate of Tibet is generally dry, subject to great extremes of heat and cold and, in the southern part, to much rainfall and snow.

POPULATION

The population of Szechwan Province is estimated at between fifty and sixty millions. At 60,000,000 the density per square mile would be 270. The Chengtu Plain, 45 by 90 miles, has the densest population, estimated at more than 2,000 per square mile.

Chinese estimates place the population of Tibet at 6,430,000, but it is probably considerably less. At these figures the population would be 14 per square mile.

CITIES

Chungking, opened in March, 1891, is the only treaty port in Szechwan Province. It is situated on a rocky promontory at the junction of the Kialing and Yangtze Rivers, about 1,550 miles from the mouth of the Yangtze. Its population is about 500,000. Europeans number about 200; Americans, 55, including children; Amer-

ican business firms, 15. Consulates are maintained by France, Germany, Great Britain, Japan, Italy, and the United States. The Japanese have a concession on the south side of the river below the city, but it has never been developed.

Chungking is the chief commercial center of Szechwan. Manufacturing, especially silk filatures, is developing rapidly. The chief industries are silk reeling, manufacture of leather and leather goods, matches, glassware, and pottery. The preparation of bristles, of skins, and of medicinal and other raw products for export employ large numbers of people. The city is also the seat of a Government mint. There are no restrictions as to foreign residence, foreigners living anywhere in the city and also on the hills across the river.

Chengt'u, the provincial capital, is on the Chengtu Plain, in central Szechwan. The population is about 700,000: Europeans, 120; Americans, 100, including children. There are no American firms. Chengtu Plain has an excellent irrigation system and is a rich agricultural district. The city is an important educational center, both for Chinese and foreign institutions. There are no foreign concessions. France and Great Britain maintain consular offices, and the Chinese Government has a mint and arsenal.

Wanhsien is on the Yangtze River, halfway between Chungking and Ichang. It is not an open port, although a branch of the Chungking Maritime Customs has functioned there since March, 1917. The estimated population is between 150,000 and 200,000: Europeans, about 20; Americans, 11; American business firms, 2. Wanhsien is the distributing center for a large area and the principal export point in China for wood oil. Other exports are untanned goatskins, medicines, and silk. The principal import is cotton yarn. Two large American firms, an oil and a wood-oil firm, have offices at Wanhsien.

Suifu is at the junction of the Yangtze and Min Rivers. It has a population of about 150,000: Europeans, 25; Americans, 30. There are no American business firms. Suifu is an important distributing center for a large area and is the terminus for ships from Chungking during the summer months. It is an important American missionary center.

Other important cities are Tzeliutsing, the salt-mining center; Kiating, silk center on the Min River; Luchow, between Chungking and Suifu; Hochow and Paoning, on the Kialing River; and Kweichowfu, between Wanhsien and Ichang. Tatsienlu, an important city in western Szechwan, is the meeting place of the trade between China and Tibet.

AGRICULTURE

Agriculture is the principal occupation of the people of Szechwan.

Rice is the most important crop and is generally cultivated throughout the "Red Basin." It is planted in April and harvested in August. The average production is 45 bushels per acre. It is the chief foodstuff of the people, and the entire crop is consumed in the Province.

Wheat is planted in August and harvested in May. The average crop is between 25 and 30 bushels per acre. Some wheat is exported to other parts of China, but the greater part is consumed in the Province.

Rape is grown extensively for oil and cooking purposes. It is planted in September and harvested in May.

The *soy bean* is very generally cultivated, chiefly as an article of food. It is planted in April and harvested in August. A variety of other beans, as winter and summer crops, are also grown as articles of diet.

Maize is widely grown throughout Szechwan. It is planted in April and harvested in June. The average crop is about 30 bushels per acre, as the crop is usually raised on poor soil.

Hemp (*Cannabis sativa* and *Abutilon*) is widely cultivated. The crop season of the *Cannabis* is February to June and of the *Abutilon* April to August. The latter is exported in considerable quantity.

Tobacco is a large crop of the Chengtu plain. Tobacco shoots are transplanted in March and the harvest is gathered in June. Tobacco leaf forms a considerable item in the exports of the Province.

Sugar of two kinds are grown, the red for chewing purposes only, and the white or yellow for manufacture into sugar. The cane is ripe in October and November. Brown sugar is exported in large quantities to other parts of China.

Sweet potatoes are widely cultivated, but the entire crop is consumed in the Province.

The most primitive farm implements are used. The water buffalo is the common farm animal, and a spade, a sickle, and a one-handed wooden plow with an iron shovel comprise the principal implements in universal use. Night soil is the common fertilizer; refuse cakes of crushed rapeseed and beans, and crushed animal bones are other fertilizers.

Water buffaloes and cows are the most common livestock. Ponies are used for riding. Every household raises for market a few pigs, which are noted for the excellence of their flesh. Goats are raised in considerable numbers. A few chickens are raised by every family, and large numbers of ducks are raised for sale to restaurants. In western Szechwan and Tibet grazing is the chief industry of the people, sheep and goats being found in great numbers.

Land holdings are invariably small. Farmers, who are usually on the border of poverty, obtain financial assistance either by selling their crop before it is ripe or by borrowing from their market town, the latter being the common practice. Throughout Szechwan these towns have frequent market days, on which occasions the farmer takes his produce to the market for sale.

MINERALS AND MINING

The mineral wealth of Szechwan is confined chiefly to the region west of the Min River. Although this region is as yet imperfectly known, it is believed to be rich in mineral resources. Gold, silver, copper, lead, zinc, coal, iron, antimony, white copper, gypsum, mica, and other minerals are found. The chief mining centers are Yachow, Tatsienlu, Ningyuanfu, and Huilichow. Zinc, lead, coal, and iron are important deposits of the Yachow region; gold and silver of Tatsienlu; gold, lead, and zinc of Ningyuanfu; and copper of Huilichow.

COAL

In the "Red Basin" the principal minerals to be found are coal, iron, and salt. Coal is widely distributed throughout the Province, but in many places it is of poor quality. The best coal is found around Suifu, Yachow, Chengtu, and along the Kialing River. No accurate statements have been made as to the quantity of coal mined annually, but it is variously estimated between 300,000 and 800,000 tons. Coal is mined by primitive native methods, as there has been no great demand in the past for coal. Now, however, with the development of manufacturing industries and the rapid increase in steam vessels on the upper Yangtze, the demand for coal is increasing, and modern methods will doubtless be adopted eventually.

IRON

Iron is widely distributed and is usually found in the same regions as coal. Chichianghsien is one of the most important iron-ore districts. The iron mined is limited to the local demand and none is exported.

SALT AND PETROLEUM

The principal salt-producing centers are Tzeliutsing, Wutungchiao (in Kiating district), Yangtaocheng (in Paoningfu district), and Kweifu, the first being the most important. The brine wells of Szechwan are famous, and the production of salt is one of its important industries. The primitive methods of raising brine by buffalo winches and bamboo rope attached to bamboo buckets are still generally employed, but during recent years simple steam bailing machinery has been introduced at Tzeliutsing. These plants consist of an ordinary steam winch, the drums of which hold about 3,000 feet of half-inch wire rope. Steam is supplied by a vertical cross-tube type of boiler. The plants are crude and inefficient, but have been adopted because of their cheapness. Considerable modern drilling machinery has been purchased by the Chinese well owners at Tzeliutsing and is being installed under the supervision of an American expert, sent especially for the work. Within a few years the entire equipment will probably be modernized. Some of the wells are 3,000 feet deep. Natural gas is used as a fuel for evaporation purposes. The number of salt wells in operation at Tzeliutsing in 1923 was 1,580, and the salt produced in Tzeliutsing and vicinity amounted to 5,366,590 piculs, or 318,535 long tons.

Petroleum is found in the salt-well regions, but none has been refined and marketed.

MINING METHODS

Mining in Szechwan is carried on entirely by natives and by primitive methods, modern machinery being used only at Tzeliutsing. Mining affairs are handled by a mining bureau in Chengtu.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The principal industries in Szechwan Province are reeling of silk; wood oil, salt, leather, glass, and bristle industries: cotton-

cloth and grass-cloth weaving; and the manufacture of paper, sugar, matches, and cigars.

SILK

The silk industry has made great progress in recent years. The chief centers for the reeling and weaving of silk are Chungking, Chengtu, Kiating, Shunking, and Tungchwan. Although by far the great part of the silk exports from this Province are raw silk, the number of modern filatures is increasing rapidly. Many of them are steam filatures, Japanese methods and management predominating. There are now some modern filatures in Chungking, employing many workers. The silk industry, apart from the modern filatures at Chungking and Chengtu, is carried on chiefly by crude methods, but the silk woven at Chengtu and Kiating is exceedingly strong, tough, and durable. This silk does not seem to have been exported to the United States in any quantity, though its excellent wearing qualities should recommend it to purchasers there, especially for the making of shirts.

WOOD OIL

The wood-oil industry now takes an important place in the industries of Szechwan. The growth of the industry during the last decade has been remarkable. Wood oil is obtained from the seeds of the fruit of the wood-oil tree (*Aleurites Fordii*), which flourishes on rocky hills and in the poorest of soils. The yield is about 40 per cent by weight of the kernels. At present the oil is extracted from the seeds by crude native presses, and it is believed that modern presses would increase the quantity of oil obtained. The center for this industry is Wanh sien, which lies in the heart of the production area. The oil is used by the Chinese as a varnish, especially for woodwork. It is exported in large quantities, the United States being the largest purchaser. Although Szechwan is the largest producer of wood oil in China, the center for its export is Hankow, in Hupeh Province. There the oil is purified and piped into ocean tankers.

OTHER INDUSTRIES

Salt.—The salt industry has been discussed under the section on minerals and mines.

Cloth.—The grass-cloth and cotton-cloth industries are important. Cotton-cloth weaving is carried on in numerous small factories, principally on native wooden looms, though a few modern machines have been introduced recently. This industry is steadily increasing, as is shown by the enormous quantities of cotton yarn which are imported into the Province every year. Grass cloth is made from hemp, widely cultivated in the Province. The hemp fiber is made into threads by women and woven into cloth on native looms. There are no large factories and no modern machinery is employed.

Sugar.—The manufacture of sugar is an important industry. It is extracted from sugar cane by native methods and is not refined. The sugar produced is very coarse, but is in great demand in Szechwan and down-river Provinces. The principal centers of this industry are Tzechow, Neikiang, Kienchow, Kaihsien, and Wanh sien.

Paper.—Paper manufacture is a very general industry. The chief centers are Mienchuhsien, Kienchow, Luchow, Wanhsien, and Chichiang. At present only native methods are used, but modern machinery will doubtless soon be introduced. Szechwan has abundant raw material for paper making.

Leather.—The preparation of leather and manufacture of leather goods has made good progress during the last few years, although the Province still exports large quantities of skins and hides. Chungking and Chengtu are the chief centers for this industry. In Chungking there are 16 factories, using principally native methods and machinery, and at Chengtu there are about the same number, including a military leather factory employing Japanese machinery. The products consist of leather valises, shoes, belts, and other leatherware, which are of good quality and for which a satisfactory market exists.

Matches.—The match-making industry has developed rapidly, and there are over 20 match factories in the Province, of which about one-half are located in Chungking. Only native machinery is used and the product is poor.

Glass.—There are 10 glass factories in the Province. Lamp chimneys are produced, principally from melted broken glass, and window glass and some fancy glassware are also manufactured. There are a few soap factories, but the quality of the product is not good. Flour milling is carried on, but not with great success. Other products manufactured are tiles and bricks, furniture, rattan ware, and cigars. The Szechwan cigar, which is commonly smoked in the Province, is much smaller than the ordinary American cigar, being about 2 to 3 inches in length and three-eighths to one-half inch thick.

ARSENAL AND MINT

A Government arsenal and mint are located at Chengtu and a mint at Chungking. The Chengtu arsenal is at present in good condition, being under the direction of a Chinese trained in Germany. Although the plants are equipped with fairly modern machinery they have all suffered from the disturbed conditions which have existed in Szechwan during the past decade. The continual change in management has prevented progress.

SUMMARY

It will be noted from the above that most of the industries of Szechwan are carried on in primitive ways and use primitive tools. The Province has vast quantities of raw material, and with the introduction of modern methods and machinery progress should be rapid. A factor which should encourage the development of manufacturing in the Province is the prohibitive freight rates on the upper Yangtze. This should stimulate the manufacture of bulky raw materials into lighter finished products, with a consequent saving in transportation charges.

LABOR CONDITIONS

There is an ample supply of satisfactory labor in Szechwan. Most of the industries in the Province are still carried on in a small

way and by primitive methods, and often the labor is supplied by the family operating a small plant. In the larger industries labor is obtained in the immediate vicinity of the factory. There are no large industrial centers as in the United States, and no labor question has yet arisen. There are a number of guilds formed of workmen in the same industry, such as the leather workers' guild, but no large organizations; consequently, strikes are almost unknown. The number of laborers is usually greater than the demand, and a worker stays in one place for years. Because modern machines are not common, skilled labor for modern factories would have to be trained.

The wages in the principal industries are as follows: Silk reeling and weaving, female, 20 cents per day; cotton-cloth weaving, male and female, \$6 per month; salt, male, \$1.50 per month; carpenter, mason, and stone mason, male, 50 cents per day; native shoemaker, male, \$6 per month; ordinary coolie, male, \$3 per month, female, \$2 per month; common laborers, unloading cargo, etc., 50 cents per day.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The Yangtze River is the sole means of transportation to and from Szechwan Province. Until the beginning of this century all traffic was carried on by junks, and the trip from Ichang through the gorges and rapids of the Yangtze was a dangerous one, requiring three weeks or more to reach Chungking. It was not until 1914 that suitable shallow-draft steam vessels were put on with a sufficiently large carrying capacity to make them commercially successful. Since then steam navigation on the upper Yangtze has developed rapidly, and the progress during the past few years has been phenomenal. The trip from Ichang to Chungking is now 3 to 5 days, and the return trip 2 to 4 days, with cargo ranging from 50 to 300 tons per vessel. Forty steam vessels now operate on the upper Yangtze, 10 of which are American. In the winter, low-water season, the larger vessels can not operate, but 17 are able to navigate the river throughout the year.

Freight rates on the upper Yangtze are still inordinately high, but are being reduced with the increase of steam transportation. In 1914 a total of 2,163 vessels entered and cleared at Chungking, of which 90 were river steamers and 2,073 were native junks; in 1923, of a total of 874 entered and cleared 628 were river steamers and 246 native junks.

Of the navigable tributaries of the Yangtze, the Min River is navigable for junks and steamers below Kiatingfu, except in winter, and as far as Chengtu for small junks throughout the year. The Ya River is navigable for rafts between Kiating and Yachowfu. It is the principal route by which foreign goods are sent to Yachowfu and beyond to western Szechwan. The Lu River, which enters the Yangtze at Luchow, is navigable below Kienchow for small craft. The Kialing, which joins the Yangtze at Chungking, is navigable for junks to Paoning, a distance of 200 miles.

The only important tributary of the Yangtze flowing north is the Kungtan River, which joins it at Fuchow, and is navigable by junks as far as Shihnanfu, in Kweichow Province, in high water.

RAILWAY PROJECTS

There are no railways in Szechwan either in operation or under construction. The following lines are either under agreement for future construction or are being considered:

Szechwan-Hankow Railway.—The Hukuang Railway loan of 1911, made by the Four Nations Group, composed of American, British, French, and German bankers, provides for the construction of the Szechwan-Hankow Railway. The Ichang-Kweichowfu section, part of which is in Szechwan, was assigned as the American section for construction. The final survey of the line was completed in 1915, but only a little construction work has been done. The length of this section is 132 miles. A preliminary survey of the contemplated extension to Chengtu via Chungking was carried out in 1914 by American engineers from the Ichang-Kweichowfu section.

Tatung-Chengtu Railway.—A preliminary contract was signed on August 14, 1913, by representatives of the Société Belge des Chemins de Fer en Chine and the Société Française de Construction et Exploitation de Chemins de Fer en Chine. This railway will be approximately 960 miles long, and at Tatung will connect with the Peking-Kalgan Railway.

Yamchow-Chungking Railway.—Early in 1914 La Banque Industrielle de Chine entered into an agreement with the Chinese Government for the construction of a railway from Yamchow via Nanning, Posi, and Singyi to Yunnanfu and thence via Weining in Kweichow to Chungking, where it will connect with the extension of the Szechwan-Hankow line. The approximate length of this line is 1,000 miles.

Yunnan-Szechwan Railway.—A survey of the line from Yunnan to Suifu (or Luchow), made by American engineers, was completed in 1911. Its length is about 450 miles. It is undoubtedly this line that is contemplated in the concession of La Banque Industrielle de Chine referred to above.

It will be seen that the above agreements provide for a system of trunk lines in western China running north and south, and another trunk line running east and west paralleling the Yangtze River, connecting the rich Province of Szechwan with the great down-river markets of Hankow and Shanghai.

During January, 1925, a report was current that a railroad would be built to connect Tzeliutsing, the great salt-mining district, with Luchow, on the Yangtze River, a distance of 70 miles. It was stated that this railroad would be financed by the salt merchants, who desire to provide a rapid and convenient outlet for their salt.

There have been a number of projects on the part of the provincial authorities for railway lines, particularly one to connect Chungking and Chengtu, but owing to the continual change in officials no progress has been made, and there is but little hope that any action will be taken until the development of a stable government.

ROADS

Although a few miles of good roads have been constructed in the vicinity of Chengtu during the past year, the roads in Szechwan are still narrow, rough, and unfit for vehicular traffic. The roads

are invariably paved with flagstones, laid crossways. Some important roads are as much as 5 feet wide, but usually the roads are narrower. Over the ever-recurring hills in the Province these flagstones are arranged in steps, which, on account of the steep slopes of many hills, make a far more satisfactory road for the traffic than an even-surfaced one.

The Chinese authorities in Chengtu made a great improvement in the city streets during the year 1924 by having them widened and paved with native cement. A modern road has also been constructed between Chengtu and Kwanhsien, a distance of 50 miles. There are about 200 rickshas and a few automobiles in Chengtu.

The principal trade routes and routes of travel are the following: (a) The "Ta-lu," or Great Road, from Peking via Taiyuanfu, Sianfu, and Hanchungfu, which passes through Paoning, Tungchwan, Chengtu, Yachowfu, Tatsienlu, Litang, and Batang and thence leads on to Lhasa, the section of this road west of Chengtu being the one over which the greater portion of the trade with Tibet is carried; (b) the road from Yachow to Yunnan, which passes through the Chienchang Valley and the city of Ningyuanfu; (c) the road along the Min River from Chengtu to Suifu; (d) the road from Chungking to Chengtu, which passes through Tzechow; (e) the road from Chengtu to Wanh sien via Shunchinfu and Suitingfu, which is of considerable commercial significance and will become more important with expansion in the trade of Wanh sien.

Land transportation.—Human carriers constitute the usual means of transportation by land; the trade with Tibet is entirely transported in this way. Pack animals, both ponies and mules, are used to some extent. Transportation by pack animals is slower than by coolies. Traveling is usually done in sedan chairs, carried by two to four coolies, who travel about 30 miles per day.

By reliable "coolie hong" (establishments providing coolies for labor and transportation purposes) at Chungking, the rate for portorage to Chengtu is now quoted as \$14 Mex. (\$7 United States currency) per coolie carrying a load of 70 catties (about 93 pounds) for the journey, which takes 10 days. At this rate transportation costs about \$168 (United States currency) per ton of 2,240 pounds. The distance is about 300 miles. Chair bearers receive the same amount. The rate for pack-animal transportation for the same journey is quoted as 15 cents Mex. (8 cents United States currency) per catty (1½ pounds avoirdupois), each mule or pony carrying a maximum of 200 catties. At this rate goods are carried the 300 miles for \$156 (United States currency) per ton. Transportation rates have almost doubled during the last 10 years, owing largely to the constant commandeering of coolies and pack animals by the military.

TELEGRAPH, CABLES, AND WIRELESS SERVICE

The telegraph service of Szechwan Province is furnished by the Chinese Telegraph Administration. There are 49 stations now in operation. Two lines run east from Chungking into Hupeh Province and two run south into Kweichow Province. From Chengtu a line runs west via Yachow to Batang, with a branch to Ningyuanfu. There is also a line connecting Chengtu with Peking via the Province of Shensi. Telegraph charges within the Province are at the

rate of 9 cents Mex. (5 cents United States currency) per word, and to other Provinces 18 cents Mex. per word. The rate to New York is \$1.80 Mex. per word. The address is charged for.

Most of the equipment in use is of German manufacture. Materials are purchased by public tender by the telegraph supply department of the Ministry of Communications at Shanghai.

There is no commercial wireless in the Province, but several of the foreign gunboats have wireless equipment.

TELEPHONES

There are two public telephone systems in Szechwan, one in Chungking and one in Chengtu. Both are controlled by the military authorities, but the telephone service has been extended to the public. The original equipment of the Chungking system was British Insulated & Helsby Cables Co., to which other equipment has been added. There are now over 100 telephone instruments in use in Chungking. The rates are \$8 Mex. per month. Part of the Chengtu system is of American make. The number of telephones in use is about 350, and the rates are approximately the same as those in Chungking.

POSTAL FACILITIES

The Chinese Government Post Office provides the postal facilities for Szechwan Province. The report of the post office for 1923 gives the total length of postal lines in the Province as 66,431 li, or about 22,143 miles. At the end of that year there were 183 post offices and suboffices and 731 postal agencies. Mail is carried by couriers, post boats, and steamers. Couriers travel on foot and carry a maximum load of 64 pounds. On most routes they travel day and night with first-class mail. Pony pack trains are used for heavy mail when water transportation is not available. First-class mail between Ichang and Chungking is carried throughout the year by steamers, but during the winter second-class mail and parcels are carried by junk.

The postal rates are 1 cent Mex. for city mail and 3 cents Mex. for mail to other parts of the Province or other Provinces of China. The rates to the United States are governed by the international postal agreement.

It usually takes from 35 to 40 days to receive first-class mail matter from New York.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

Owing to a difference of 60 to 100 feet between the summer and winter water levels of the Yangtze River at Chungking, there are no stationary wharfs or docks in the harbor. Ships arriving at Chungking must either tie up at pontoons, which are changed with variations of the water level, or anchor at one of the several anchorages.

There are about eight recognized anchorages within the Chungking harbor limits. Not all of these are available at the same time owing to the changing water level. As the subject of anchorages at

different water levels is too complex to be treated here, inquirers are referred to the various publications of the Chinese Maritime Customs.

There are at present at Chungking some 14 pontoons of various sizes and construction. Six of these are owned by foreign shipping firms, and the greater part of the remainder are either rented or leased by foreign firms.

The ships which anchor in the river transfer their cargo to lighters and those which tie up at pontoons transfer their cargo onto the pontoons or into lighters. With the exception of one ship which has a steam derrick and a few oil tankers, all cargo is transferred from the ships to lighters and pontoons by Chinese coolies. A coolie is paid 40 cash per package when discharging cargo and 60 cash when loading. The size of the package is immaterial, the payment being according to the number of coolies required to carry it. As the present exchange is about 3,400 cash to \$1 Mex., 40 cash is about 1 cent Mex., or one-half cent in United States currency. An average of about 30 tons an hour can be loaded and an average of 40 tons per hour discharged by coolies.

Goods for the Szechwan trade should be strongly packed but not in heavy packages, preferably not more than 100 pounds if the goods are to be carried inland.

WAREHOUSING AND STORAGE

There are only a few public warehouses in Chungking. One, a modern concrete warehouse, and another, a Chinese building of brick and timber, belong to British firms. Each of them has a capacity of approximately 700 cargo tons. An American company has a limited storage space available in short-term, small-quantity lots. Warehouse charges for a bale of cotton yarn ($3\frac{1}{3}$ piculs, or approximately 440 pounds) are about 42 cents Mex. per month.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The only lighting plants in this Province are at Chungking, Chengtu, Luchow, Suifu, and Tzeliutsing.

The Chungking plant was installed by a British company, and the engines, boilers, stokers, superheaters, and feed-water heaters are British products. The electric equipment is German. The capacity of the plant is 500 kilowatts; the generating voltage is 440 and the consumer's 220. Distribution is on three-wire system through balancers. The total lamp capacity of the plant is 16,000 20-watt lamps. The monthly charge for service is \$1.80 Mex. per 20-watt tungsten lamp; light is furnished from 6 p. m. to about 11 p. m. The plant has not proved a financial success.

The Chengtu plant is operated by a Chinese company, the Ch'i Ming Electric Light Co. It was installed by a German firm, but some of the machinery was supplied by a British company. Equipment is the same in general as in the Chungking plant. The capacity of the plant is 125-kilowatt volt amperes. The current is alternating, 50 cycles, 3,300 volts.

There is another company in Chengtu, the Shang Yeh Electric Light Co. The machinery is said to be German.

There is a small electric plant at Luchow, with 80-horsepower engine. The plant generates 12 kilowatts and has a voltage of 100. The total lamp capacity is about 500.

Small electric-light plants have recently been installed in Suifu and Tzeliutzing.

Undoubtedly Szechwan Province offers a rich field for the installation of lighting plants. The beginning has not been very propitious, as the present companies are not operating profitably. The Chinese have not yet learned that machinery needs care and much attention to every little detail. For firms obtaining a contract to install a lighting plant it would be advisable to insist upon the employment of a foreign engineer for at least three years.

However, the future for lighting plants, as for many other types of public works in Szechwan, depends largely upon the establishment of a stable government in the Province. Under present conditions Chinese are not willing to invest their money in such enterprises.

CONSERVANCY WORKS

In 1915 an Upper Yangtze Conservancy Board was organized in which the Maritime Customs was represented but the board did not function. A certain amount of work has been accomplished by private effort and by the Maritime Customs in removing dangerous rocks at several of the worst rapids and in Chungking Harbor.

IRRIGATION WORKS

The Chengtu Plain, with an area of about 2,400 square miles and a reputed population of 5,000,000, has an irrigation system which, according to Chinese history, dates from the third century before the Christian era. At Kwanhsien the Hsi, or Sungpan River, debouches from the mountains and divides its waters among the many channels that cross the plain from the northwest to the southeast. Here the streams converge to form the Min River, which empties into the Yangtze at Suifu. These streams have been supplemented by a multitude of canals, whereby an almost perfect distribution of water throughout the whole plain has been effected. Of this irrigation system Richthofen states that it "is probably not excelled in perfection anywhere."

EXPORT AND IMPORT TRADE

The trade of Szechwan Province is tributary to Shanghai and Hankow and is largely in the hands of Chinese, acting either for themselves or as local agents for foreign firms in the down-river ports. The foreign firms in Szechwan, with the exception of two large concerns importing kerosene, are primarily exporters of native produce and do very little importing. There is practically no direct trade between Szechwan and foreign countries. Exports from the Province are sent to Shanghai and Hankow, where they are prepared for export abroad.

Exports destined for the United States are rarely declared at the American consulate in Chungking. The goods are shipped down the river and consular invoices taken out by the exporting firms at the American consulates in Shanghai and Hankow.

The principal features in the trade of Szechwan during the last decade have been the rapid change from native junk transportation to steam transportation on the upper Yangtze, the increase in the import of kerosene and Chinese cotton goods, and the increase in the export of wood oil and grass cloth.

The following table gives the gross and net value of foreign goods passing through the Maritime Customs at Chungking during the years 1903, 1913, and 1923:

	1903	1913	1923
	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>
Imported from foreign countries and Hongkong.....		778,435	671,398
Imported from Chinese ports.....	18,073,921	10,433,656	7,430,052
Total foreign imports.....	18,073,921	11,212,091	8,101,450
Reexported to Chinese ports (chiefly to Ichang and Wansien).....	582	3,631	44,542
Net total foreign imports.....	18,073,339	11,208,460	8,056,908

It will be noted that imports of foreign goods have declined considerably since 1903. This is because foreign cotton goods, particularly cotton yarn, have been displaced by Chinese cotton goods, or rather cotton goods manufactured in China by Chinese and foreign factories.

EXPORTS

The total exports from Chungking increased from 8,276,796 Haikwan taels in 1903 to 24,576,773 in 1923, a notable increase, particularly as the figures for 1903 include an item of over 2,000,000 taels for opium, an article which does not now appear in the customs figures.

The 10 leading exports in 1903, in the order of their importance, were opium, silk, musk, hides (cow and buffalo), bristles, goatskins, white wax, sheep wool, nutgalls, and hemp. In 1923 the leading items were silk, grass cloth, goatskins, Chinese medicines, bristles, white wax, leaf tobacco, sheep wool, fungus, and wood oil.

Generally speaking, native products are first collected by peddlers and disposed of in the small market towns. They are then brought to market centers or larger towns by dealers, who in turn sell them to agents of Chungking merchants. An abundance of waterways facilitates transportation to Chungking.

The principal exports from Chungking during the years 1903 and 1923 are given in the following table (in which all figures represent thousands, both for quantity and for value):

Commodities	1903		1923	
	Quantity	Value	Quantity	Value
		<i>Haikwan taels</i>		<i>Haikwan taels</i>
Bamboo shoots.....piculs			9	107
Bones.....		7		11
Books, printed.....		5		37
Bristles.....piculs	11	320	13	1,129
Cordage, all kinds.....do			5	42
Feathers.....do	3	14	5	50
Fiber, coir.....do	3	8	9	77
Fungus.....do	3	116	7	466
Glue.....		2		32
Grass cloth.....piculs			11	3,568
Hair, human.....do		3		14
Hides, cow and buffalo.....do	19	431	12	248
Intestines.....				245
Lead:				
Pig.....piculs	5	30		
White.....do		3	2	35
Leather.....do	1	47	1	124
Lily flowers, dried.....do			8	115
Mats (not including matting).....pieces			439	170
Medicines.....		75		1,861
Musk.....		750	17	351
Nutgalls.....piculs	11	193	25	236
Oil, wood.....		1		432
Opium.....piculs	6	2,374		
Paper.....do				16
Peel, orange.....do	3	12	7	30
Rhubarb.....do	11	116	8	146
Silk cocoons, refuse.....do	14	337	15	390
Silk piece goods.....do		18		54
Silk, pongee.....do		45		
Silk, raw, total.....do	8	1,441	14	9,101
Filature.....do			6	2,783
Waste.....do			5	4,738
Skins, goat, untanned.....pieces	639	316	1,434	2,563
Sugar, brown.....piculs	8	28	32	208
Tallow, animal.....do	6	59	3	39
Tallow, vegetable.....do	1	6		
Tin, Yunnan.....do	1	33		
Tobacco, leaf and stalk.....do			36	774
Turmeric.....do	25	69	36	202
Varnish.....do			1	86
Vegetables, all kinds.....do			8	35
Wax, white.....do	6	280	7	1,059
Wool.....do	25	258		
All other.....		879		515
Total.....		8,276		24,577

Silk, the largest export from Szechwan, accounted for two-fifths of the total exports from Chungking in 1923, and the silk filature industry is developing rapidly. Grass cloth, manufactured from ramie fiber, ranks second among the exports for 1923.

The bristles exported from Szechwan, especially the white bristles, are considered the best in China, and a large American manufacturer of toothbrushes has recently placed a representative at Chungking to engage principally in the export of white bristles. The black-bristle trade is largely in the hands of the Japanese and British.

Tobacco ranks seventh among Chungking's exports, Szechwan tobacco leaf proving particularly popular in other Provinces of China in the making of cigars and cigarettes.

Medicinal products, such as licorice, aconite, snakeroot, and scull-cap are exported in considerable quantities, although the bulk of the output is for use of the Chinese.

Fungus of two kinds, black and white, is another peculiar export from Szechwan. The white fungus is a great delicacy of Chinese diet, the present market price being \$30 (United States currency) a pound.

Winter is the trade season for musk. Formerly Germany made large purchases, but in recent years France and other countries have bought still more to be used as the basis for perfumes. Exports of musk have decreased, however, owing to the development of the manufacture of synthetic musk in Europe.

Exports of buffalo and cow hides and sausage casings have decreased, owing in the case of hides to the development of a local leather industry.

Nutgall exports have shown a steady increase, as has also brown sugar.

IMPORTS

Imports are purchased chiefly at Shanghai by local Chinese firms, except in the case of sewing machines, cigarettes, and kerosene, which are distributed largely by the foreign firms which manufacture them. The following table shows the principal articles of import at Chungking for the years 1903 and 1923:

[Quantity in thousands of units; value in thousands of Haikwan taels]

Commodities	1903		1923	
	Quantity	Value	Quantity	Value
FOREIGN GOODS				
Bêche de mer.....piculs	1	51	1	64
Buttons.....gross	109	37		10
China ware.....				70
Cigarettes.....number			9,599	9
Clocks and watches.....do	9	11	3	2,685
Cotton manufactures, total.....		16,771		2,627
Piece goods.....		2,587		
Yarn.....piculs	391	14,184	1	58
Drugs and chemicals.....		70		168
Dyes, total.....				441
Aniline.....		116		315
Indigo, artificial.....piculs			2	113
Fans, palm-leaf.....number	1,707	12	591	19
Fish and fish products.....piculs		3	3	104
Furniture and materials.....				46
Ginseng.....piculs		102		120
Glass and glassware.....		8		17
Lamps and lamp ware.....		9		73
Metals and minerals:				
Copper.....piculs			12	431
Iron and steel, total.....		101		324
Bars.....piculs			60	87
Hardware, stoves, etc.....		60		36
Nails.....piculs			2	11
Needles.....number	230,995	41		
Tinned plates.....piculs			8	64
Wire, galvanized.....do			9	126
Quicksilver.....				18
Tin.....piculs			1	51
White metal.....				20
Machinery.....				38
Oil, mineral:				
Fuel.....tons			1	17
Gasoline.....gallons			16	11
Kerosene.....do	62	8	5,809	1,737
Paper.....		3		55
Perfumery.....		41		39
Seaweed and agar-agar.....piculs	13	30	17	50
Silk goods, artificial.....yards			36	15

Commodities	1903		1923	
	Quantity	Value	Quantity	Value
FOREIGN GOODS—continued				
Soap, toilet.....		<i>Haikwan taels</i> 8		<i>Haikwan taels</i> 30
Spices.....piculs.....	4	95	6	246
Woolen goods and mixtures.....		192		404
Umbrellas.....number.....	37	43	48	28
All other.....		363		717
Total.....		18,074		8,057
CHINESE GOODS				
Books, printed.....piculs.....	1	39	1	44
Brass ware.....		8	1	33
Buttons.....		11		
Candles.....piculs.....			3	57
Cardamoms.....				13
Cassia.....	3	17	1	12
China roots.....piculs.....	6	46	3	54
China ware (excluding pottery).....		5	14	543
Cigarettes.....piculs.....			2	185
Clothing.....				83
Cotton, raw.....	2	45	7	251
Cotton manufactures, total.....		2,077		24,784
Cotton goods, all kinds.....		1		365
Cotton yarn.....piculs.....		2,076		24,128
Cotton yarn.....do.....		18	1	38
Cuttle-fish.....	1	99	3,425	49
Fans.....number.....	1,299			68
Furniture.....		28		13
Glass and glassware.....				80
Machinery.....				297
Medicines.....	163			
Opium lamps, etc.....number.....	12	26		
Pipes, tobacco.....do.....	11	7		
Pontoons and bridges.....				40
Quicksilver.....		4		18
Seeds.....number.....	1	10	1	26
Silk piece goods.....		181		167
Soap.....				72
All other.....		251		1,332
Total.....		2,871		28,259
Total imports, Chinese and foreign.....		20,946		36,316

The five leading imports, in the order of their importance, were, in 1903, cotton goods; woolen and cotton mixtures; aniline dyes; ginseng, American and Japanese; household stoves. In 1923 they were cotton goods; kerosene; copper ingots and slabs; woolen and cotton mixtures; aniline dyes.

The most striking feature in the import trade of Chungking during the past 20 years has been the phenomenal increase in the import of Chinese cotton goods, which have almost displaced foreign cotton goods. In 1903 imports of foreign cotton goods were valued at 16,771,486 haikwan taels and Chinese cotton goods at 2,058,265. In 1923 foreign cotton goods had decreased to 2,685,700 taels and Chinese goods had increased to 24,373,345. The imports of Chinese cotton goods consist almost entirely of cotton yarn, the product of factories in Shanghai and other Chinese cities.

The trade in cotton piece goods is still in the hands of foreigners, but has declined because of the considerable cotton-cloth industry that has developed in the Province.

Kerosene has shown a remarkable increase, ranking in 1923 as the second most important import. The oil is principally American, with comparatively small quantities from Sumatra. A great de-

mand has been created in Szechwan for oil, and its import should steadily increase.

The importation of aniline dyes has increased. During the European war German dyes were cut off, but during the past few years German agents in Chungking have been active and German dye imports are steadily increasing.

The following lines of American goods might be introduced: Condensed milk, hosiery, toilet soap, clocks and watches, safety razors, medicines, lamps and lamp ware, enameled ware, and soda ash. It should always be remembered, however, that cheapness is usually an essential qualification in this market. American goods must be ready to meet a keen competition as regards both price and quality.

In 1923 the principal imports and exports at Wanh sien were as follows:

Items	Quantity	Value
IMPORTS		<i>Haikuan taels</i>
Chinese cotton goods.....piculs	56,760	3,338,055
Kerosene:		
American.....American gallons	789,796	} 231,490
Sumatra.....do.	10,000	
EXPORTS		
Hides, buffalo and cow.....piculs	8,584	174,743
Nutgalls.....do.	6,667	73,733
Oil, wood.....do.	244,175	5,518,355
Skins, goat.....pieces	288,950	353,934
Sugar, brown.....piculs	8,249	58,737

MONEY AND BANKING

BANKS

There is only one foreign bank in Szechwan, the American-Oriental Bank of Szechwan, Chungking, organized in 1922. This bank handles foreign exchange, but the Chinese banks do not generally handle such business.

Exchange between Chungking and Shanghai is a factor which must be carefully considered in doing business with Chungking. In normal times it costs from 98 to 102 Chungking taels to buy a Shanghai draft for 100 taels, but during the year 1924 this rate went up to 117 and was often over 110. These abnormal exchange conditions were due in part to the excess of imports over exports. The comparatively peaceful conditions prevailing in Szechwan during 1924, in contrast with the disturbances of the previous years, proved a great stimulant to imports, especially cotton yarn. Another contributing factor was the embargo on the export of silver from Chungking, inaugurated by the Chinese authorities.

LOCAL CURRENCY

The currency used in business transactions is the Szechwan tael, which was established as the uniform tael for the Province in 1908. The Szechwan tael is commonly known as the *Chin-ch'i-p'ing*, which means that 100 Szechwan taels are equivalent to 97 Kuping taels,

the latter being the central Government tael. All accounts of business houses are kept in terms of the Szechwan tael.

The only paper currency generally acceptable on the local market is the note, in \$1 and \$10 denominations, issued by the American-Oriental Bank of Szechwan.

ADVERTISING

Advertising in the Chungking district must be conducted in the Chinese language, through Chinese newspapers, posters, handbills, calendars, and similar mediums. There are no foreign newspapers, and advertising placed in the Hankow and Shanghai foreign newspapers will only reach the limited number of foreigners in the district who subscribe to such journals.

There are 10 Chinese newspapers published in Chungking and about the same number in Chengtu. The following are among the leading newspapers in Chungking: Shang Wu Jih Pao, circulation, 2,300; Hsin Shu Pao, circulation, 1,000. All papers have seven issues a week. The average annual subscription is about \$3 United States currency.

Advertising rates vary, according to the size of the type, from 15 to 45 cents per 100 characters or words per day. Advertisements by the week, fortnight, and month receive a discount of 10 to 40 per cent on the above rates, and for longer periods the rates are subject to special arrangement. Double rates are usually charged for outside-page advertisements.

TRADE ORGANIZATIONS

At Chengtu and Chungking there are general chambers of commerce similar in character to those in other parts of China.

Every trade and industry, even to beggars on the streets, has its guild. The power of the guilds is very great, and some of these organizations exact severe penalties for the infraction of their regulations. The chamber of commerce which exists in nearly every city in the district may be likened to a large central guild, with specific trade guilds as its branches.

There is only one foreign-trade organization in the district, the British Chamber of Commerce at Chungking, with a membership of about 30.

TRAVEL FACILITIES

There is now an all-year Yangtze steamer service between Ichang and Chungking, it requiring three to five days for the up trip and two to four days for the down trip. Except on the Yangtze River, traveling in the interior must be done by native boat, chair, or pony.

There are no hotels in Chungking with accommodations for foreigners. Tourists usually live on the steamers, and those who remain for a longer period should make arrangements with business connections or with one of the local foreign missions, which are usually able to accommodate a few people.

Spring and autumn are the best seasons of the year for visiting Chungking.

LIVING COSTS

The large foreign firms in Chungking provide living quarters for their representatives. A newcomer not attached to one of these firms would probably have to adopt a Chinese house to his needs or build one.

Considering all conditions, living costs for a man and wife (including rent, food, chair bearers or boatman, servants, heat, light, and ice) will figure up roughly about \$210 to \$280 United States currency per month. Two children would probably increase this amount by 10 to 20 per cent. A single man's expenses would be from \$150 to \$190 per month.

Recreational facilities at Chungking consist of club privileges and private entertainment.

There is one school for foreign children in Chungking, covering all grades from primary to high school entrance, under Canadian regulations and auspices. There is also a Canadian high school for foreign children at Chengtu.

Rent for office space in Chungking would run from \$55 to \$85 (United States) per month for four to six rooms. Rent for warehouse space varies according to locations, but it may be estimated from \$15 to \$55 per one-sixth of an acre.

Rent for residential purposes in Chungking is from \$35 to \$75 (United States) per month for four to six persons, and in Lungmenhao, across the river, from \$40 to \$80 per month.

The fees charged by the Chinese authorities in transference of land were fixed by presidential mandate in 1914 at 9 per cent of the value of the land, but the local authorities have increased these fees, in spite of protests, until they now amount to about 15 per cent.

TRADE OF TIBET

Tibet, except the Kokonor region, is included in the Chungking consular district, but it is for all practical purposes an unknown country.

The trade between Tibet and China is considerable. Tatsienlu, in western Szechwan, being the chief center of this trade. The principal exports from Tibet that pass through Tatsienlu are wool, skins and furs, musk, deerhorns, medicinal herbs, gold, and borax. The chief imports are tea, cotton goods, tobacco, and candles. Tea is by far the most important import, as it is an article of universal use in Tibet. Tea is usually imported in the form of brick tea, which is made by grinding up inferior grades, mixing the product with rice water, and then compressing it into solid bricks. These bricks weigh about $4\frac{1}{2}$ pounds, and as they are in general demand they are often used in Tibet as money. It has been estimated that between 11,000,000 and 13,000,000 pounds of tea are consumed annually in Tibet. Some of the articles of export from Chungking are products of Tibet. The principal route between China and Tibet is the Chengtu-Tatsienlu-Batang-Lhasa road.

The chief articles of export from Tibet to India are wool, live animals, salt, musk, and precious stones. It is estimated that 2,000 tons of wool and 30,000 to 40,000 live animals are exported annually.

The chief imports from India are cotton piece goods, metal and metal ware, woolen and silk piece goods, and sugar. These goods are imported in only small quantities.

Near the Indian border there are three trading marts which have been opened by British treaties and through which foreign trade may be carried on. These are Gartok, in western Tibet, and Gyantse and Yatung, in southern Tibet. The trade through these places is inconsiderable.

DAIREN CONSULAR DISTRICT

By Consul Leo B. Sturgeon

LOCATION AND AREA

The Dairen consular district, which covers the Kwantung leased territory, occupies the southern tip of Liaotung Peninsula, and has an area of 1,302 square miles. The climate is dry and bracing, resembling in this respect Colorado and Wyoming. The land, consisting chiefly of rolling hills with much rock substratum, is lacking in fertility in many places. The latitude of the territory corresponds approximately to that of northern Kansas or north-central Colorado. The annual rainfall is 30 inches. The average minimum temperature for a normal year is -15° to -16° C., and the average maximum temperature 32° to 33° C.

POPULATION

The population of the district totals 720,177, according to latest available official statistics. The average density for the district is estimated at 553.13 to the square mile. Population figures based upon nationality show 86,261 Japanese, 632,741 Chinese, 731 Koreans, and 444 foreigners.

Dairen is the leading city, and the only one of international importance in the Kwantung leased territory. It is located on Dairen Bay, a fine and well-equipped harbor, and forms the main port of entry for this territory as well as for Manchuria. The population of Dairen, including some recent incorporations, is now officially estimated at 186,519, and the continued expansion of its commerce and industries give prospects of a steady increase in the city's growth. The Japanese number 72,359, Chinese 113,251, Koreans 555, and foreigners 354.

AGRICULTURE

At the beginning of 1923 the Kwantung government estimated the area of improved farm lands in the leased territory at approximately 255,151 acres, and the number of farmers engaged in agricultural enterprises on these lands at 189,358, of which 303 were Japanese and the remainder Chinese. The principal crops cultivated were varieties of soy beans, kaoliang, millet, wheat, barley, peanuts, and rice.

During the past few years, experiments for the improvement of certain agricultural products, of methods of cultivation and fertilization, have been carried out with the result that marked advances have been made in each of these phases of the agricultural industry. The improvement of the varieties of soy beans has been of the

greatest economic importance; not only in increased production of beans (about 20 per cent) but in an increase of about 10 per cent in their oil content.

Experiments in fruit growing and stock farming have been carried on to great advantage, but as yet these industries are unimportant economically, though their future development is considered promising. The territory is believed to be admirably adapted to fruit growing. According to statistics of the Kwantung government, approximately 2,200 acres are devoted to the production of grapes, peaches, apples, pears, and other fruits, the average annual production totaling about 2,972,343 pounds.

MINERALS AND MINING

There are numerous ore and mineral deposits found in this territory, but only a few produce in commercial quantities. Two mineral products—coal and placer gold, which were mined to some extent in 1922—do not appear in the table of minerals extracted in 1923.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The industrial development of the Kwantung leased territory, together with that of South Manchuria, continued at a fair rate during 1923. As yet, however, this territory has but one manufacturing industry of major importance; that is the bean-milling industry. Since Dairen is its center, it may be said that the bean-milling industry belongs more properly to the leased territory than to any other section of Manchuria.

During the year the number of bean mills in Dairen increased from 72 to 79, and the production capacity for bean cake, by 9,300 tons. Actual production increased from 28,920,000 cakes in 1922 to 31,000,000 in 1923.

In spite of congested conditions in the bean-milling industry, new mills are being established from time to time. As a result all are forced to remain idle a considerable part of each year. The busiest months are December, January, February, and April. But business done over so short a period hardly suffices to meet costs and afford a profit, consequently a number of failures were noted in 1923.

The capital invested in the bean-milling industry in the district is estimated at 19,776,000 yen, and the number of persons employed varies according to seasons. There are now about 81 mills equipped for crushing operations, and all but 9 of these are under Chinese management; the remainder are under Japanese or Sino-Japanese control. The capacity of the latter is 37,500 cakes a day, and the former 251,000. Forty-six of the mills use hydraulic presses to produce 186,100 cakes, and 35 mills turn out 102,600. The oil production varies greatly, according to the quality and oil content of the beans.

There is a bean millers' union in Dairen in which 98 per cent of the owners hold memberships. The union serves as an instrument through which its members may work in unison in bringing about necessary changes in the bean-milling industry. Products of this industry are prominent in the export trade of Japan, Europe,

America, and China. Bean cake goes to America, Japan, and China; oil largely to America and Europe.

Brick, cement, glass, sugar, soap, dyes, soy, and starch are manufactured, on a relatively small scale, in the Dairen district.

LABOR CONDITIONS

The labor employed in the territory is practically all Chinese. In the artisan classes, and in some capacities in factories or mills, the Japanese find employment, but almost never attempt to compete with the Chinese in the lower positions. The largest groups of workers are employed in work on the wharves and in the bean-milling industry.

Living conditions of the coolies employed on the wharves may be taken as typical. It is estimated by the wharf authorities that 60 to 70 per cent of the earnings of coolies is required for food, leaving 30 to 40 per cent for clothing and shelter. Under these circumstances, the coolies find it necessary to live in squalid, poorly ventilated lodgings. There is little difference between the mode of living of the married men and the single men, except that the single men generally take their meals at street stalls or places of a similar nature. On the other hand, there is a tendency to pay somewhat higher wages to married men. The average wage, however, for both single and married men is about 70 sen per day.

TRANSPORTATION AND COMMUNICATION

RAILWAYS

Since there are no navigable waterways in the Kwantung leased territory, it is but natural that railway and ocean transportation plays an increasingly important part in its commercial development. The South Manchuria Railway system serves the territory. The railway also manages the local port (including all such facilities as warehouses and sundry equipment), as well as the local street-car system. Extensive iron and coal mining operations are carried on, and an important iron works is maintained.

In addition to industrial and commercial undertakings, the railway engages in a number of enterprises from Port Arthur to Changchun, commonly carried on by municipalities. Prominent among these are the establishment and management of schools, hospitals, and educational or research societies, social clubs, libraries, and hotels. In a word, the interests of the railway cover a field as wide as commerce and industry itself.

The rolling stock of the railway at the end of the fiscal year ended March 31, 1924, comprised 377 locomotives, 391 passenger cars, and 6,247 freight cars. Of the above equipment, 11 locomotives, 18 passenger cars, and 67 freight cars were constructed during the fiscal year named.

Freight rates on the South Manchuria Railway are, in the main, based upon classification schedules covering the usual classes of goods carried. Rules governing the application of these rates, as well as schedules of the classification of goods, are obtainable in English from the freight traffic department of the railway. The mileage from the Dairen wharves to the principal stations along

the railway line is as follows: Anshan, 192.8; Liaoyang, 208.2; Mukden, 248.2; Changchun (northern terminus), 437.6.

Passenger fares are calculated according to class of passage desired.

ROADS

Road building is receiving increased attention by Government and private interests alike. The most important highway so far constructed is the recently completed motor road between Dairen and Port Arthur, the seat of the Kwantung government, about 30 miles distant. There are also several short roads leading to near-by suburbs, which may be used by motor vehicles. These are being improved steadily, largely because of the greater traffic demands being made upon them.

Most of the freight moved over the public highways in this territory is carried in carts drawn by horses or men, motor vehicles being used very little except in the city of Dairen, where there are approximately 200 passenger and commercial cars in use.

There are no fees or tolls collected in connection with the use of roads in this territory as all public highways are maintained at government expense. In general, existing roads (when various minor improvement projects have been completed) are regarded as adequate for present needs.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

These facilities are all operated by the Japanese Government. Messages may be dispatched from Dairen by cable or wireless, and connections with the United States and other countries are considered adequate. Rates to Shanghai, the principal commercial and trading center of China, average about 33 sen per word (equivalent to \$0.176 cents); and to New York 2.16 yen (\$0.826 cents). Radio messages to New York may also be sent at \$0.666 per word.

There are but two commercial wireless stations in the Kwantung leased territory, and these are utilized to broadcast only paid messages. There has been no development of radio as an educational and entertainment medium, although appropriations have been approved and plans are being formulated for the establishment of a broadcasting station for this purpose. The plans in question provide for the erection of a radio station to be operated under the supervision of the department of communications of the Kwantung government. Announcement has been made by this department that permission will be granted to some local firm or amalgamation of firms to erect a broadcasting station, such firm or organization to be granted the exclusive right to market radio equipment in the Kwantung leased territory, in return for the initial expenses it will incur. An effort is then to be made to subordinate fees which will be charged for broadcasting services, and to have the concern intrusted with broadcasting depend upon the sale of radio equipment as its chief source of revenue.

With an appropriation available for the establishment of a radio bureau for the control of broadcasting and receiving, the erection of a broadcasting station and the general adoption of wireless constitute developments that are expected soon to materialize. Already the general public is showing much interest in these prospects.

TELEPHONES

The first automatic telephones in the Japanese Empire were installed in April, 1923, and have proven highly satisfactory. The telephone service is operated by the Japanese Government, and at the end of March, 1923, there were 7,589 telephones and 457 miles of wire employed. Recent statistics show 976 subscribers to telephone service in Dairen, and 618 more in the Manchuria Railway zone. The subscription rate is 108 yen per year, payable in quarterly installments.

The experiment with automatic telephones having proved very satisfactory, extensions are being made to the service as the demand arises. The equipment used is of a modern type, and is contracted for by the bureau of communications of the Kwantung leased territory.

SHIPPING AND WAREHOUSING FACILITIES

PORT ACCOMMODATIONS

The head of Dairen (or Talien) Bay forms the harbor for the city of Dairen. The harbor, which is partially natural, is well improved and equipped with modern facilities. There is a breakwater $2\frac{1}{2}$ miles in length, with entrances for steam vessels, sailing vessels, and small harbor craft. An area of 33,744,000 square feet is available for use inside the breakwater. The depth of water at low tide is 30 feet and there is a tide range of 8 feet.

The harbor has commodious docking accommodations, and more are being added in expectation of the future growth of Dairen as a port. There are at present 34 berthing sections each 400 feet in length, and a pier 1,132 feet in length for inflammable goods. For berthing and towing purposes, steam launches, ranging from 11 to 435 tons, are available. In the harbor steel lighters of 100 to 500 tons' capacity are also utilized to move cargo.

Ample facilities exist for the supplying of water and coal. Water may be supplied from hydrants at berths, or from water boats in the harbor.

Chinese coolies are employed in the transfer of cargo from the ship's tackle to port. Arrangements are made for this at the harbor office, but the labor is supplied by a firm known as the Fukusho Co., sole contractors of Chinese coolie labor at the port. An average of 6,000 to 8,000 laborers of this class is employed daily, the per capita working capacity being estimated at about 5 tons.

The following table gives the number of vessels and the amount of tonnage entered and cleared at this port during the past two years.

Nationality	1922		1923	
	Number of vessels	Tonnage	Number of vessels	Tonnage
American.....	88	359,728	59	373,466
British.....	307	854,707	162	726,988
Chinese.....	1,282	938,291	903	930,352
Dutch.....	60	260,216	32	216,016
German.....	6	37,191	31	204,716
Japanese.....	3,260	5,598,940	1,958	4,853,000

CARGO-HANDLING FACILITIES

Chinese coolie labor is the chief means of loading and unloading cargo from ships, but on the water, two 50-ton and five 5-ton floating cranes are in use. A number of 1½, 3, 5, 15, 30, and 70 ton cranes are utilized ashore. The cargo-handling capacity averages about 30,000 tons per 10-hour day.

The following shows the cargo-shifting equipment of the port, which gives a shifting capacity of about 20,000 tons per 10-hour day.

Total length of shifting sidings (miles)-----	37
Locomotive engines -----	14
Goods cars (33 tons each)-----	250
Motor trucks (4 tons each)-----	6
Electric trucks (2 tons each)-----	12
Tractors -----	2
Trailers (2 tons each)-----	18

The cost of transferring cargo from ship's tackle to port is approximately 0.55 yen per ton. However, some of the steamship companies, principally Japanese, secure reductions on cargo-shifting rates for cargo billed through to the interior.

STORAGE FACILITIES

The warehouse and storage facilities, which are located chiefly in the wharf compound, consist of two-story concrete, wooden-frame, and corrugated-iron structures, the latter being merely sheds. Refrigerator storage has recently been provided for on the ground floor of a newly constructed passenger station, and heated warehouses are available for winter storage. The total area available for storage is 5,680,860 square feet. Of this space, warehouses and goods sheds occupy 3,337,439 square feet, and the remainder is open storage. The total maximum storage capacity of the wharf compound is 800,000 tons. Storage charges on ordinary goods amount to 3½ sen a day, per weight or measurement ton, depending upon the character of the commodities being stored. However, if stored goods are subsequently reshipped to the interior by the South Manchuria Railway, 50 per cent reduction will be made on storage charges.

Exports for Dairen should be very securely packed, owing to the possibility of a number of transshipments and the prospect of rough handling. The many difficulties attending the settlement of claims for damaged cargo serve to emphasize the importance of packing. Man-drawn and horse carts, and electric trucks and trailers comprise the principal means of carrying goods from landing to warehouses, as well as to dealers in the city. Certain commodities may be kept in temporary storage for seven days, then placed in warehouses.

As above indicated, there are adequate facilities for open storage in the wharf compound, but cold winters and warm summers somewhat minimize their usefulness. The existence in various warehouses of storage facilities adapted to both warm and cold weather largely removes climatic conditions from the problem of local storage.

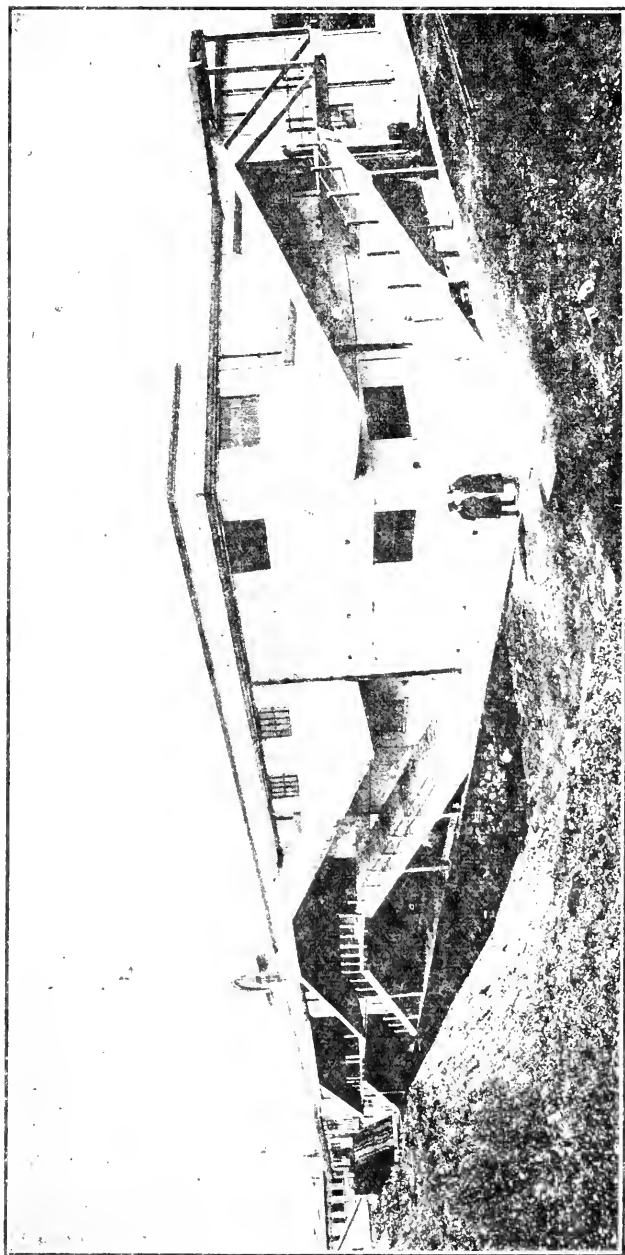


FIG. 22.—Reinforced concrete warehouse typical of treaty ports in China, showing covered runway adaptable for coolie carriers

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The South Manchuria Railway maintains in Dairen an electric plant which has a combined light and power load of 16,000 kilowatts. During the fiscal year ended 1924, 12,527,555 kilowatt-hours of electricity and 11,505,477 horse motive power were supplied in the city of Dairen for light and power purposes.

The equipment employed in the light plant in Dairen is of modern type, the majority of which has been supplied by America, Great Britain, and Sweden. The plant is financed by the railway in the same manner as its other enterprises. Receipts from the supply of light and power are gradually increasing. At the end of the fiscal year 1924, there were 26,572 subscribers, and receipts had amounted to 2,236,067 yen.

Recent extensions to electrical equipment of the city of Dairen comprise additional wiring, and the addition of a 5,000-kilowatt Stal turbine engine to the power plant.

WATERWORKS

The local waterworks, which is maintained by the government of the territory, is situated near the city of Dairen. The water is considered unusually healthful and the supply is adequate. The daily capacity of the present facilities is approximately 21,000 cubic meters.

TRAMWAYS

There is only one electric street-car system in this territory, and that is maintained for the city of Dairen and points near by. The system is a modern one operated by the South Manchuria Railway Co. and extends over 40 miles. Its equipment comprises 85 passenger cars, 10 freight cars, and one street sprinkler.

The total number of passengers carried during 1923 totaled 20,730,877. Considering the population of the districts served by the system the volume of passenger traffic is small. Accounting for this is the fact that an extensive system of horse-carriage transportation is maintained throughout the zones of the electric railway. The carriages are drawn by one or two horses, driven by Chinese. They are a crude means of conveyance, but as they are available on nearly every street corner and charge an average fare of only about 10 to 15 cents, it is generally believed that in the aggregate the earnings of the horse-carriage system are greater than those of the electric lines.

The equipment for use in the Dairen electric lines has heretofore been purchased from a variety of sources, including Japan, England, Germany, Sweden, and America. While details regarding particular equipment may be obtained direct from the purchasing department of the South Manchuria Railway Co., it is necessary to sell through well-established local firms.

Extensions to the present street-car system will probably not be made in the near future. The most noteworthy recent development has been a change in traffic regulations, causing street cars to pass

on the left instead of the right-hand side. All other traffic previously followed this plan.

CONSERVANCY AND RECLAMATION WORKS

Comparatively little work of this nature is being carried out in this territory, the principal projects constituting the improvement and reclamation work in the Dairen harbor. Dredging of Dairen Bay was reported about 75 per cent complete in the last report of the South Manchuria Railway Co., and the work of filling in and reclaiming the East Jijiko water front was reported as advanced to the same extent. Reclamation work of a like nature at Hsikangtzu was estimated as approximately 26 per cent complete.

Work which was begun in 1893 on 896 feet of new wharfage is now well advanced. Additional track was also laid to facilitate the handling of coal for export.

No important reclamation work was undertaken at Port Arthur.

EXPORT AND IMPORT TRADE

Dairen is the only commercial port in the Kwantung leased territory, and its customs returns may be taken to represent the trade of the territory. It is necessary, however, to point out that this trade is made up largely of shipments from and those intended for the hinterland of Manchuria. This remarkable feature of the trade of Dairen is accounted for by the fact that its importance in foreign trade, both import and export, is due to its geographical position as the principal port not only for the Kwantung leased territory, but for Manchuria as a whole and for points beyond.

The tables have been prepared from statistics of the Chinese Maritime Customs at Dairen, in order to indicate the volume of trade to and from this port by representative years. Figures are given from the standpoint of the principal commodities involved, and with reference to destination of exports and origin of imports. Lack of customs data makes it impracticable to deal with the various destinations or origins of particular commodities.

The following shows the total trade of the port for 1913, 1923, and 1924:

Items	1913	1923	1924
IMPORTS			
Foreign goods:	<i>Haikwan taels</i>	<i>Haikwan taels</i>	<i>Haikwan taels</i>
From foreign countries and Hongkong.....	28,740,282	68,416,348	81,173,840
From Chinese ports.....	3,795,674	10,486,262	18,193,965
Chinese goods.....	4,514,589	17,085,983	
Total.....	37,050,545	95,988,593	99,367,805
EXPORTS			
To foreign countries and Hongkong.....	29,749,041	111,451,223	141,304,757
To Chinese ports.....	9,298,702	33,954,901	
Total.....	39,047,743	145,406,214	141,304,757

EXPORTS

The following shows the leading articles of export and the value of this trade in 1913, 1923, and 1924:

Exports	1913		1923		1924	
	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels
Bean cake.....piculs..	8,459,484	16,749,778	19,258,741	42,369,230	20,444,804	44,978,568
Bean meal.....do.....			451,461	316,022	469,763	331,107
Beans.....do.....	2,478,243	6,189,023	12,284,378	36,670,959	13,206,897	39,347,805
Bran.....do.....	70,645	76,304	995,007	1,691,512	460,686	902,724
Cement.....do.....	262,877	262,877	89,564	89,714	525,064	525,079
Cereals:						
Kaoliang.....do.....	399,232	598,849	3,730,748	9,328,870	1,345,743	4,037,229
Maize.....do.....	127,848	233,962	1,945,073	3,980,146	532,861	1,332,122
Millet.....do.....	724,139	1,853,793	285,591	713,977	169,488	508,464
Cigarettes.....do.....	659	47,579	29,363	2,059,470	28,416	1,990,060
Coal.....tons.....	1,003,054	4,092,460	2,178,234	13,052,366	2,462,153	14,768,762
Oil, bean.....piculs..	580,712	4,169,512	1,876,230	15,010,960	1,506,399	13,557,591
Pig iron.....do.....			1,338,476	2,676,952	1,477,748	2,955,496
Salt.....do.....	714,102	142,820	2,873,240	1,264,225	2,729,750	1,201,090
Seed:						
Hemp.....do.....	252,329	481,274	237,309	783,119	487,233	1,474,578
Perilla.....do.....	76,196	248,399	174,651	817,367	202,722	1,148,583
Sesame.....do.....	33,547	240,196	297,962	1,787,772	193,867	1,355,809
Silk:						
Raw, wild, not flature.....piculs..	8,298	1,725,984	3,230	1,304,920	1,368	377,568
Raw, wild, flature.....do.....			4,866	3,216,426	2,553	1,243,311
Silk cocoons, wild.....do.....	44,045	454,524	34,765	1,601,251	18,529	333,522

NOTE.—The haikwan tael in 1913 was equivalent to \$0.742, United States; in 1923, to \$0.8231; and in 1924, to \$0.81.

IMPORTS

The table below shows the leading articles of import and the value in haikwan taels in 1913, 1923, and 1924:

Imports	1913		1923		1924	
	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels
Bags, gunny, new.....pieces..	6,735,876	1,003,645	13,442,918	2,680,810	16,256,565	3,691,033
Cement.....piculs..	268,742	231,656	541,495	738,728	142,364	155,435
Cereals: Rice and paddy.....piculs..	229,886	1,149,430	156,324	893,607	85,244	523,318
Cigarettes.....thousands..	195,638	388,241	1,776,816	5,307,569	1,048,522	3,072,400
Cotton goods:						
Sheeting, gray, plain, over 11 pounds, Japanese.....pieces..	540,919	1,898,627	64,060	347,505	22,607	89,314
Shirting, gray, plain, over 11 pounds.....pieces..	48,830	152,838	233,316	1,433,502	171,087	1,071,937
Jeans, Japanese.....do.....	47,180	154,161	209,237	916,472	106,731	488,029
Dyed cottons, twills.....do.....			92,580	611,308	40,917	270,886
Japanese cotton cloth: Imitation native cotton cloth, gray and dyed.....pieces..	55,016,397	2,750,820	314,373	540,273	303,861	514,148
Cotton yarn, gray, Japanese.....pieces..	40,698	1,014,600	35,205	1,681,233	13,369	709,510
Electrical materials: Cables, wire, and cord.....(1)				660,269		2,225,277
Flour, wheat.....piculs..	527,676	2,005,169	864,654	4,057,269	1,949,282	8,881,319
Gasoline, benzine, naphtha, etc.....gallons..	(1)	(1)	911,872	782,849	993,998	547,396
Machinery and parts.....		517,533		2,823,975		5,450,730

¹ Unavailable.

Imports	1913		1923		1924	
	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels
Metals and minerals: Iron and mild steel, new:						
Bar.....piculs..	77, 815	238, 894	222, 288	892, 148	422, 639	1, 428, 084
Rails.....do.....	7, 700	23, 100	215, 579	898, 429	556, 325	1, 766, 680
Iron, galvanized sheets...do..	42, 258	262, 517	56, 405	517, 371	82, 815	707, 231
Oils:						
Kerosene, American						
.....American gallons..	5, 894, 360	665, 063	6, 476, 696	2, 101, 200	9, 920, 652	3, 239, 835
Lubricating, mineral						
.....gallons.....	453, 832	124, 894	1, 666, 690	886, 849	1, 527, 030	678, 237
Sugar, refined.....piculs..	49, 647	276, 049	124, 131	1, 140, 658	122, 701	1, 029, 364
Tobacco leaf.....do.....	14, 476	447, 454	19, 868	796, 666	27, 596	976, 766
Wax, paraffin.....do.....			53, 389	520, 096	57, 424	711, 245
Wines, beer, spirits, etc.: Sake in bulk.....piculs..	38, 190	310, 868	26, 050	664, 105	26, 464	544, 188
Woolen goods: Coating and suiting.....yards..	(¹)	(¹)	351, 254	826, 733	330, 371	725, 446

¹ Unavailable.

RECENT DEVELOPMENTS IN FOREIGN TRADE

Since the Russo-Japanese War, Japan has held a predominant position in the foreign trade of South Manchuria, and it is therefore natural that the greater portion of the trade of the Kwantung leased territory is in the hands of Japanese. Even before the establishment of its new political boundaries, Japan was the foremost customer of Manchuria.

There has been a rapid growth in the foreign trade of the Kwantung leased territory and South Manchuria through the port of Dairen, owing to the commercial and industrial development of the territories served, and both imports to and exports from this territory have registered remarkable gains. Imports from and exports to the United States during 1923 amounted to \$12,173,236 and \$3,390,109, respectively.

MONEY, BANKING, AND CREDIT

BANKS

Banking facilities as affecting transactions between this district and the United States are believed to be ample, and are generally satisfactory to American exporters and importers. The local banks engaging in foreign-exchange business are branches, two of Japanese banks and one of a French bank. There are, however, branches or agencies of all of these banks maintained in America. In addition, an agency of the International Banking Corporation is in operation in Dairen. The only complaint heard concerning banking facilities is that there is little accommodation afforded to the Chinese. The explanation ventured for this is that the Chinese of this territory are not yet familiar with the processes involved in foreign trade.

The following table sets forth pertinent data regarding the banking establishments maintaining offices in this district:

Insttution	Nationality	Head office	Capital
Yokohama Specie Bank.....	Japanese..	Yokohama	Paid up (fully), 100,000,000 yen.
Bank of Chosen.....	..do.....	Tokyo.....	Subscribed, 80,000,000 yen; paid up, 50,000,000 yen.
Hongkong & Shanghai Banking Corporation.	British.....	Hongkong.	Authorized, £50,000,000; paid up, £20,000,000.
International Banking Corporation.	American.	New York.	Capital and surplus, \$10,000,000.
Russo-Asiatic Bank.....	French.....	Paris.....	Paid up (fully), 55,000,000 rubles.

LOCAL CURRENCY AND EXCHANGE

The financing of imports to this port from America presents about the same problem as it does to ship to Japan proper. The local currency is the gold yen (par value \$0.4985; average value for 1923, \$0.4866), and practically all of the importing is in the hands of branches of firms having head offices in Japan. Consequently the cost of imported articles is met by means of exchange transactions in gold yen, and local distribution is accomplished in the same way. There are exchange problems resulting from the varying relative values of Chinese and Japanese currencies, both of which are employed in the domestic market, but the solution of these can be made only by the local importer or distributor.

The export trade is most seriously affected by the changing values of Japanese and Chinese exchange. The reason for this is that the raw products which, in some form, make up the principal exports of this territory must be purchased from Chinese dealers in their own currencies. Fluctuations in the value of the Japanese yen, such as have taken place in recent months, make it very difficult for Japanese exporting firms who have their capital in yen to keep prices low enough to facilitate trading. The difficulty created by this situation is especially noticeable in the market for beans and bean products.

QUOTATIONS AND CREDITS

Quotations are made both f. o. b. and c. i. f., but local importers prefer the latter method. Local dealers request credit terms for varying periods up to 90 days, but the wisdom of granting credit—except in the case of concerns known to be reliable—is questioned. In most cases this credit should be extended by local banks, which are in a much better position than anyone else to know the financial position of local firms. Credit may be and is extended by means of discounting trade acceptances.

MERCHANDISING METHODS

Merchandising methods are much the same as in Japan. Direct representation should be undertaken only as a part of an elaborate marketing plan which would have for its purpose the gradual development of a sales organization covering the whole of Manchuria. Usually the spring and fall seasons are periods of heaviest buying. Dairen, on account of its excellent communications by land and sea, is the logical assembling and distributing point for both the Kwantung leased territory and other Manchuria. Buyers' organizations

are not of any importance, excepting the Consumers' Union of the South Manchuria Railway, which supplies household requisites to a considerable number of railway employees.

It has been demonstrated that American goods can be sold in Manchuria in competition with foreign goods. The import trade from the United States might, however, be improved if American exporters could give it a more intensive study with reference to advertising and representation. The most effective representation has been found to consist of connections with local establishments. The field is not sufficiently large to encourage direct representation, although a traveling representative, when in the Far East, might be routed through this territory for demonstration purposes.

As Dairen is a free port, its trade enjoys comparative freedom from taxation. Taxes affecting import trade are usually indirect and are assessed upon volume of business, depending upon the kind, rather than upon particular articles.

ADVERTISING

Advertising is becoming a more important factor in the marketing of goods in this territory. Newspapers comprise the principal medium, but billboards, printed circulars, and street-car displays are also employed. There are no taxes on poster advertising.

TRADE ORGANIZATIONS

The principal trade-promotion organization in this district is the Dairen Chamber of Commerce, but a knowledge of the Japanese language is necessary in order to take advantage of the facilities it offers. Therefore it is the practice of the consulate in Dairen to secure from the chamber of commerce such information as might be of interest to American business firms and place it at their disposal either through letters and reports or directly, as occasion arises.

TRAVEL FACILITIES

In Dairen, the only place where commercial travelers to this territory would find it necessary to stop, the only available hotel is the one under the management of the South Manchuria Railway. It offers comfortable, modern accommodations on both the European and the American plan.

Commercial travelers may obtain information regarding hotel accommodations, rail and steamship travel, interpreters and guides, from the American consulate or from the Yamato Hotel in Dairen; or from the Japan Tourist Bureau, with offices in Dairen and other important centers in the Orient.

The most effective method of making contacts with Japanese or Chinese firms is to secure letters of introduction to well-established local firms, should that be possible. In the absence of such letters, the American consulate is often able to advise commercial travelers and to render assistance relative to the making of contacts with firms of good character.

PROPERTY VALUES AND RENTS

Property values and rental charges are, on an average, comparatively reasonable in this territory, but are, of course, highest in Dairen, the chief city. Recent periods of business depression have tended to lower land values as well as rents. The somewhat overbuilt character of the city has also operated to keep rent rates moderately low, although rates for convenient locations remain somewhat high.

Land rights are usually obtained by lease rather than by purchase, owing to the fact that the major portion of the usable land is government-owned and not for sale.

TAXES AND OTHER ASSESSMENTS

There are various taxes collected in this territory, but foreigners are as a rule called upon to pay only three kinds. These are (1) a business tax, (2) an income tax on juridical persons, and (3) a family tax. General business taxes may be considered as based upon the volume of sales in wholesale and retail business, with A and B classifications for both types of business, depending upon the commodity dealt in. Thus, Class A wholesale business is assessed upon volume of sales at the rate of 12 yen for 10,000 yen; Class B, 17 yen for 10,000 yen. A retail business is assessed 33 yen per 10,000 yen and 50 yen per 10,000 yen for classes within A and B, respectively. In addition, 2 yen is collected for each employee engaged in the particular business in question.

Income taxes are levied on juridical persons whose head offices are in the Kwantung leased territory and with respect to income on property or business in the Kwantung leased territory, except those whose offices are in Japan proper or another of its dependencies. Such taxes are collected on profits of over 10 per cent of capital employed at the rate of 4 per cent; over 20 per cent at 10 per cent; and over 30 per cent at 20 per cent. Reserves are taxable also at varying rates.

Individuals residing within Dairen are subject to what is called a municipal family or house tax, and it may be said that the system in practice here is unlike any other system in force in Japan proper. The amount to be levied is first decided upon with reference to local requirements. Then juridical persons and persons forming a household are divided into 30 classes, according to salaries received above 600 yen annually. The amount of tax to be collected from any individual is then determined by dividing the total amount to be levied by the sum of the products of the number of rate payers in each class and the rate unit for that class, and multiplying the result by a rate specified for the individual in question. It will be noted at once that an arbitrary unit rate, based upon their salary, is fixed for each class of individuals. Thus, an individual does not compute his own tax according to a certain percentage of his net income, but has it computed for him by means of a system designed to assess the required revenue from a given number of persons having a certain income, at the same time distributing the taxes among 30 classes of individuals grouped according to salary.

LIVING CONDITIONS

There are no boarding establishments in Dairen that could be recommended to commercial travelers. Since the Yamato Hotel furnishes the only available boarding or lodging accommodations, its rates represent the approximate cost of living in Dairen for commercial travelers.

The entrance fee to the local club is 50 yen and dues are 7 yen per month. Motor hire may be reckoned on a basis of 4.50 yen per hour or 1.50 yen per trip. Aside from motion pictures and occasional concerts by local or visiting talent, there are no noteworthy entertainment facilities, and there are no educational facilities for foreign children. Provision has been made for baseball, tennis, and golf. Membership in the local golf club requires an initial expense of 125 yen and 5 yen per month thereafter.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

The growth of the bean industry, with the attending rise of export trade in bean products, and the development of modern port facilities and land communication facilities constitute the main reasons for Dairen's commanding position as a trade center. The World War, changes in the character of shipping, and the progress of manufacturing in Japan have had important influences on the trade. Between 1908 and 1918 Dairen advanced from fifth to second place among the ports of China, according to customs returns. Gradual progress was registered between 1913 and 1918. There followed three years of marked prosperity and then a depression set in which is still felt in diminishing degree. However, the position of the port has been maintained. Exports of beans and bean products have become increasingly important, often approximating 50 per cent of the trade. The character of imports has changed to meet the demands of the industrial and social progress of Manchuria. The manufactures of Japan strongly predominate.

The influence of the principal nations in the import trade of Dairen has been a big factor in maintaining a diversity in both imports and exports. A remarkable index to the influence of various nations in Dairen's trade is found in the character of the shipping.

Before the World War Japanese shipping was paramount, followed by that of Great Britain and Germany; after the war Germany's position was assumed by America, although, with regular freight and passenger services restored, Germany is now rapidly recovering.

The promise for the future of Dairen lies in the fact that it is not only a remarkably well-placed terminal point for all oversea trade destined for North China, but that it is the logical distributing center for all Manchuria—a territory sufficiently vast to give opportunity for far greater development of Dairen as its leading port and entrepôt.

FOOCHOW CONSULAR DISTRICT

By Consul Ernest B. Price

LOCATION AND AREA

The Foochow consular district comprises the northern 37 counties (hsiens) of the Province of Fukien, which is situated on the southern coast of China about midway between Shanghai and Hongkong. Lying between latitudes 25° and 28° N., the district corresponds in latitude with Florida from the city of Tampa southward. The area of Fukien Province is 46,332 square miles, and that of the Foochow district may be roughly approximated at 30,000 square miles, or about that of the State of Maine.

The climate is semitropical, the customs at Foochow having recorded no frost during the past 10 years. The rainfall is heavy and well distributed, generally occurring from January through September. The three remaining months are relatively dry. The average rainfall at Foochow from 1918 to 1923, inclusive, was 60.25 inches. The average minimum temperature was 34.5° F.; average maximum temperature 97°.

POPULATION

The Chinese postal estimates of 1922 gave the total population of Fukien Province at 13,157,791, or 284 per square mile. The population of Foochow district may be estimated at 10,000,000, or about 330 per square mile, the densest population of Fukien being in the Min River Valley and in the coast regions between the cities of Foochow and Amoy.

CITIES

The most important cities of the district are shown in the following table:

Cities	Estimated population	Europeans and Americans	Americans	Firms	
				Foreign	American
Foochow ¹	700,000	400	250	25	10
Santuso ¹	40,000	10	-----	2	1
Hinghwa.....	60,000	50	36	-----	-----
Kienning.....	45,000	5	2	-----	-----
Yenping.....	35,000	39	39	-----	-----

¹ Treaty ports where foreigners may reside for the purposes of trade.

Foochow, the provincial capital, is the only important city, from the point of view of foreign trade. With the exception of a small

percentage of goods that cross the northwest boundary from and to the Yangtze Valley by way of Kiangsi Province, and a still smaller percentage of direct trade between the city of Hinghwa and Shanghai, all the export and import trade of the district passes through Foochow. Santuao is a collection center for teas, which, however, are shipped to Foochow for export. Yenping, situated at the junction of the most important tributaries of the Min, is next after Foochow in importance as an assembling and distributing point for trade.

AGRICULTURE

Ninety per cent of the population of the Foochow district make their livelihood directly or indirectly from agriculture. The most important products are rice, tea, and fruits.

RICE

Although only about 10 per cent of the surface area of the district is arable land, and only a limited proportion of that is suitable for rice culture, the growing of rice engages the attention and provides the livelihood of more people than all other industries combined. In the coastal region two crops are grown, the first planted in March and harvested in July, the second, planted in April between the rows of the first crop and harvested in November. In the inland districts but one crop is grown. A normal average yield is 44 bushels to the acre. The total estimated annual production in a good year is 66,000,000 bushels, but this is insufficient to meet the needs of the people, and there is an average importation of about 100,000 bushels annually.

TEA

Once second in importance to rice, tea has gone to third place among agricultural products and among exports, owing to the competition of cheaper India and Java teas. There are two general varieties, black and green. The black is exported abroad and the green is sent to other parts of China. There are three crops, the first and best being harvested in May and coming to market about June 1. The total annual estimated production of tea of all grades is 28,000,000 pounds, of which in 1923 approximately 15,500,000 pounds were exported abroad and to other parts of China. Foochow teas are still regarded by tea men as the finest grown, but they have become comparatively too expensive.

FRUITS

Fruits constitute one of the leading classes of agricultural products and stand fourth in importance as an item of export. Foremost of the fruits are oranges, of which the annual average production is estimated at 27,000,000 pounds. Approximately two-thirds of the crop is exported to other parts of China. Next are "Chinese olives," a fruit akin in appearance, though not in species, to the foreign olive.

The estimated annual production is about 12,000,000 pounds, 50 to 65 per cent of which is exported to other parts of China either in fresh, dried, or pickled form. Other interesting fruits are lungngans—a native fruit harvested in November, with an estimated an-

nual production of 25,000,000 pounds—of which possibly 10 per cent is exported in dried form; litchis, harvested in July, with an annual production estimated at 20,000,000 pounds; and “plums,” with an annual production of about 10,000,000 pounds.

OTHER PRODUCTS

Other products are grown in variety. The leading ones of this lesser group, with the estimated annual production of each, are shown in the table below:

Products	Average production per acre	Estimated annual production	Disposition
Bamboo shoots.....pounds.....		20,000,000	Local consumption and export.
Sweet potatoes.....bushels.....	440	8,000,000	Local consumption.
Wheat.....do.....	30	7,538,000	Do.
Sugar cane.....pounds.....	1,300	1,500,000	Do.
Peanuts.....bushels.....	30	2,500,000	Do.
Tea oil.....pounds.....		25,000,000	Local consumption and export.
Wood oil.....do.....		1,000,000	Do.
Peanut oil.....do.....		2,000,000	Do.
Mushrooms.....do.....		1,100,000	Do.
Camphor.....do.....		200,000	Export.

TIMBER CUTTING

Timber may be divided into two classes—fir poles and pine lumber. The fir forms virtually a crop, as the cuttings are replaced by plantings. The poles are shipped to all parts of China for use as beams and rafters for houses. Pine is brought down the river in log rafts and is sawed into lumber in the sawmills in Foochow. It is a direct competitor with Oregon pine. The Foochow product is inferior in quality but cheaper.

Both the fir and the pine being almost entirely exported, the export figures may be taken as a fair basis for estimating total production. The total export of poles in 1923 numbered about 13,000,000, sawed pine lumber amounted to 40,000,000 square feet, besides 1,500,000 boxes made locally from pine lumber.

MINERALS AND MINING

The extent of the mineral resources of the district is rather problematical, little mining or even prospecting having been done. In 1917, the latest year for which reliable figures are available, the following minerals, in the order of their importance, were being worked: Coal (anthracite of high grade, with an annual production of approximately 35,000 tons), molybdenum (51 per cent molybdenum, 49 per cent sulphur), talc (annual production, 250,000 pounds), porcelain clay, limestone, iron, lead, silver, gold, copper, and graphite.

Of the minerals named only gold, molybdenum, limestone, kaolin, and talc were being produced in 1922, and these only in small quantities. The chief obstacles to the development of the mining industry are inadequate mining laws and lack of transportation facilities.

MINES

Mines in operation or being prospected under regular charter in 1923 were:

Company	Location of mine	Nature of ore	Output in 1923	Capital (nominal equivalent in United States dollars)	Nationality	Head office
Leesan Coal Mining Co.	Chienou district.	Anthracite.	<i>Tons</i> 30,000	\$120,000	Chinese.	Foochow.
Chien Ming Coal Mining Co.	do.	Gold.	(1)	50,000	do.	Do.
Hua Pao Copper Mining Co.	Nanping district.	Copper.	(1)	50,000	do.	Do.

¹ No definite figures available, but production was small.

In addition there were several regularly registered Chinese companies no longer active, and a great number of small unregistered mines, particularly coal and iron, the latter turning out an indefinite but fairly large output consumed locally. The best coal in the district, said to contain but 3 per cent ash, is from extensive anthracite deposits near Shaowu.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

Next to agriculture in importance to the economic life of the district is a small group of native industries including paper making, sawmilling, and the manufacture of paper umbrellas, tin foil, and matches. Next comes a group of lesser industries, of what might be termed the "modern type," including a leather tannery and factory, a factory for making rubber soles for shoes, and a few knitting and weaving mills. Summarized, the industries mentioned stand about as follows:

Industries	Capacity	Approximate number of employees	Approximate capital invested (Mex.)	Estimated output, 1923	Disposition of output
Paper making	120,000 tons	60,000	\$1,800,000	59,000 tons	85 per cent exported.
Sawmilling	8,700,000 logs	800	870,000	36,000 square feet of lumber; 1,500,000 boxes.	All exported.
Paper umbrella manufacture.	3,000,000 pieces	2,000	150,000	2,000,000 pieces	75 per cent exported.
Tin-foil manufacture.	450 tons	1,200	240,000	210 tons	70 per cent exported.
Matches	80,000 gross	30	120,000	40,000 gross	Local.
Weaving mills	1,000,000 pieces	2,000	200,000	500,000 pieces	Consumed locally.
Knitting mills	80,000 dozen pairs of socks.	250	80,000	50,000 dozen pairs of socks.	Local.

The only industry whose product is exported outside of China is the paper-umbrella industry. About 1,000,000 umbrellas are exported abroad annually. The export in the other industries is to other parts of China only.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

Waterways are the most important means of transportation in the district, there being no railways, and, outside of the city of Foochow, no roads capable of accommodating vehicular traffic or even pack animals. The "lower districts," from Foochow east and south along the coast of Amoy, are reached by small steamers and junks. The "upper districts," from Foochow north and east through the upper reaches of the Min River and its tributaries, are reached by launches of 6-foot maximum draft as far as Shuikow, and from there by small river boats only. The "northern districts," from Foochow north along the coast to Chekiang, are traversable by small coastwise steamers and junks.

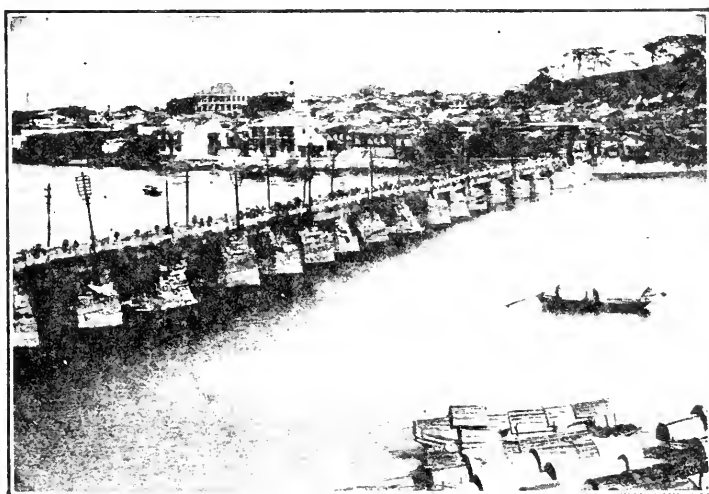


FIG. 23.—The Bridge of Ten Thousand Ages at Foochow, which it is proposed to replace with a modern steel and concrete structure

The Min River from Foochow to the sea is navigable for vessels of 24-foot maximum draft as far as Pagoda Anchorage, 20 miles from the sea and 10 miles from Foochow. Steamers of 15-foot draft and under come all the way to Foochow. Back of the three areas mentioned above is a hinterland not accessible even to boats, comprising about 40 per cent of the area of the district, where all transportation is accomplished by human carriers.

Means of transportation	Average load per unit	Average mileage per day	Average cost per ton-mile (United States)	Maximum haul (miles)	Per cent of traffic carried
Steamers, junks, and launches..... tons..	250	70	\$0.04	140	20
River boats, sail or hand propelled..... do.....	20	25	.05	200	40
Human carriers..... pounds.....	100	20	.80	75	40

The above figures are a rough estimate only and are to be discounted by additional consideration of the factor of serious risk involved, which has not been included because it is indeterminable. This is particularly true of river transportation. It is estimated that 1 river boat in 10 is either partially or totally wrecked in making the 200-mile trip from Shaowu to Foochow. Cargo thus carried can not be covered by insurance.

ROADS

In the hinterland, mountainous and almost unknown to foreigners, the only roads are rough, narrow, stone paths. Fully 40 per cent of the goods transported in that district is carried over these paths on the backs of men—the slowest, most expensive transportation in the world.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

Foochow is connected with Hongkong, Shanghai, and world points by the eastern extension, Australasia & China Telegraph Co. (British), which has a relay cable station at the mouth of the Min River, connected with Foochow by a land line. The Chinese Government Telegraph Association lines cover the district, and the same institution maintains a wireless station in Foochow.

Wireless rates are \$0.25 (Mex.) per word to points within the radius, which is small. Telegraph and cable rates are the same as in other districts of China for all interior points and for world ports.

TELEPHONES

The Fukien Telephone Co. (Ltd.), a Chinese company, capitalized at \$45,000 (Mex.), covers the city of Foochow and surrounding towns. It has three exchanges with 752 subscribers; switchboards are manual, metallic circuit, multiple type, 12 in number. Rates are \$7 (Mex.) per month for original phones and half that amount for extension phones. The company plans to change its equipment to the better system.

POSTAL FACILITIES

Adequate postal facilities, provided by the Chinese Postal Administration, cover the district. Foochow has about two mails a week from Shanghai and three from Hongkong. Important points throughout the district have frequent mail service.

SHIPPING AND WAREHOUSING FACILITIES

Next after the lack of railroads and other means of rapid transportation, the great drawback to the progress of the district is the inadequacy of Foochow's harbor facilities. Only vessels of 15-foot draft or under are able to come closer to the city than Pagoda Anchorage, 10 miles below. While the anchorage has an excellent harbor capable of accommodating 30 steamers at a time, it, too, is handicapped by a bar at the mouth of the Min River, where ocean steamers must wait from two to five hours for the tide, both in entering and in clearing port.

CARGO-HANDLING FACILITIES

There are no dock accommodations at Pagoda. Cargo is transferred by ship's tackle into sail and hand-propelled boats, in which it is sealed by the customs until arrival at Foochow, two or more days later.

Facilities for handling cargo at Foochow are inadequate, there being no bonded warehouses, cranes, trucks, or other facilities for speedy handling. Cargo boats from Pagoda Anchorage must wait their turn for unsealing and examination, after which cargo is transferred to docks and from docks to warehouses by human carriers. Altogether it may take a week from the fall of the ship's anchor at Pagoda to the arrival of the cargo in the consignee's warehouse.

Climatic conditions do not permit storage in the open. Business houses usually maintain their own warehouses, and space is difficult to obtain. Goods should be packed with unusual care for protection against both pilferage and climate. Boxes and cases should be strapped. Those containing goods liable to deterioration from dampness should be lined with zinc or with lead foil.

PUBLIC WORKS AND UTILITIES**ELECTRIC-LIGHT PLANTS**

The Foochow Electric Light Co. (Ltd.), a Chinese company, operates with a capital of \$1,000,000 (Mex.). It is equipped with three generators of American manufacture having a total capacity of 2,500 kilowatts, operated by a 2,500-horsepower boiler of British manufacture, and a 3,300-horsepower turbine of American manufacture. The plant supplies alternating current, 220 volts, 60 cycles, on 3-phase power terminals, and 110 volts on light terminals. Rates are \$1 to \$2.50 flat rate per point, depending on the candlepower; \$0.28 per kilowatt-hour by meter for lighting; and \$0.15 per kilowatt-hour for power. (Rates as here given are in terms of Mexican dollars). It has a 1,200-kilowatt lighting load and a 300-kilowatt power load. The company owns and operates several small industrial plants and has the franchise for an extensive water-power plant, now under investigation.

In addition to the above company, there are about nine small plants in the larger cities of the district.

CONSERVANCY WORK

In 1919 a Min River conservancy board was created by the Chinese Government—consisting of representatives of both Chinese and foreign business interests, and of which the foreign consular body are ex officio members—to carry out a project for the deepening of the channel of the Min River from Pagoda Anchorage to Foochow to a minimum low-water depth of 10 to 12 feet, to enable steamers up to 15-foot draft to come up to Foochow. The basis of the plan eventually adopted was the erection of a system of training walls to enable the river to scour its own channel. The cost was to be met by a special surtax on shipping and goods, and the prospective revenue was given as a security for a loan from the

Chinese Maritime Customs to provide operating capital. By the end of 1923 very fair progress had been made, but it was decided, in order to speed up the work, to purchase a suction dredger. It is anticipated that the project will be completed in the near future, but work will necessarily have to continue for some years, however, to combat the natural silting of the river and keep the channel clear. The engineer in chief is an American.

EXPORT AND IMPORT TRADE

There is a general impression that the foreign trade of Foochow suffered seriously as a result of the decline of the tea trade, but comparative figures of the value of the trade of the port show that in 1903—a year in which tea to the amount of over 40,000,000 pounds (valued roughly at 6,000,000 haikwan taels) was shipped out—the total value of the trade of Foochow was equal to about \$10,700,000 United States currency; in 1913, when tea exports had declined to 20,000,000 pounds, valued at approximately 4,000,000 haikwan taels, the total value of the trade was equal to \$16,900,000 United States; and in 1923, when tea exports totaled less than 16,000,000 pounds, with a value of 2,880,000 haikwan taels, the value of the total trade was equal to approximately \$31,500,000 United States.

It is worth noting that the export trade figures alone for the three index years increased five times, while the import figures almost doubled. In short, the trade had merely changed from a situation in which a single export commodity practically dominated the trade, to one in which there was a healthy distribution among a number of different commodities, both export and import.

The port of Foochow stands fifteenth among the 47 customs ports of China in the value of its total trade, and taken with its tributary port of Santuao it stands fourteenth. In the following table the trade of Foochow is shown for 1913, 1923, and 1924, in terms of United States gold:

Items	1913	1923	1924
Exports.....	\$7,066,443	\$19,268,649	\$16,088,629
Gross imports.....	13,480,775	15,928,474	16,239,844
Gross value of trade.....	20,547,218	35,197,123	32,328,473
Reexports.....	3,629,743	3,712,807	3,253,905
Net value of trade.....	16,917,475	31,484,316	29,074,568

NOTE.—In 1913 1 haikwan tael was equal to United States gold \$0.729; in 1923, to \$0.8231; in 1924, to \$0.8097.

EXPORTS

The principal exports of the district in order of their importance are timber (in the form of fir poles, sawed pine timber, and prepared boxes), tea, paper, mushrooms, bamboo shoots, paper umbrellas, tin foil, camphor, oranges, olives, and dried litchis. Among Chinese ports, Foochow ranks first in the export of poles, bamboo shoots, olives, and mushrooms; second in the export of tin foil, oranges, paper, pine lumber, and paper umbrellas; third in the export of camphor and tea (both black and green); and fourth in the export of dried litchis.

Foochow district is primarily a producer of raw products which find their principal market in other districts of China. The port of Foochow, however, ranks tenth among the 47 customs ports of China in the value of its original exports, and eleventh in the value of its exports to foreign countries.

It is noteworthy that whereas in 1903 the value of the tea exported from the port of Foochow was approximately 80 per cent of the value of the first 10 products, it represented only about 50 per cent of that value in 1913, and 20 per cent in 1923. On the other hand, exports of the other nine principal products increased in value in every case. Timber reached first place, tea held second place, and paper was a close third. The total value of these first 10 products showed in 1913 a slight increase over 1903, but in 1923 they nearly tripled the value in either other index year. The principal exports from Foochow in 1913, 1923, and 1924 are shown below:

Commodities	1913		1923		1924	
	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels
Bamboo shoots.....pounds..	12,527,866	599,048	8,882,533	544,187	17,495,066	1,337,750
Camphor.....do.....	27,600	14,700	149,200	148,833	70,733	49,066
Litchis, dried.....do.....	58,533	12,404	345,600	70,502	153,600	35,066
Mushrooms.....do.....	387,066	179,956	496,933	548,987	605,600	552,535
Olives.....do.....	5,649,733	121,566	3,932,800	108,397	7,013,200	204,396
Oranges, fresh.....do.....	13,750,400	210,005	14,964,133	161,296	17,049,466	183,216
Paper.....do.....	13,862,400	1,360,307	18,565,733	2,057,071	29,314,133	3,340,565
Tea:						
Black.....do.....	16,828,133	3,637,295	6,046,933	1,569,503	5,906,666	1,947,958
Green.....do.....	647,600	91,650	9,474,666	1,326,392	8,057,466	1,273,620
Brick.....do.....	2,154,533	195,856			8,000	778
Dust.....do.....	738,666	53,713	110,000	4,826	65,600	1,840
Timber:						
Boxes.....pieces.....	894,758	2,023,935	1,531,735	(1)	1,269,617	198,910
Planks.....square feet..	6,179,297		36,552,369	2,127,863	40,725,169	2,327,032
Poles.....pieces.....	834,758		3,616,571	12,622,127	9,551,258	3,614,910
Umbrellas, paper.....do.....	759,256	68,000	1,355,379	311,737	1,382,005	497,521

¹ Not obtainable.

NOTE.—For the haikwan tael, equivalent values in United States currency are as follows: In 1913, \$0.729; 1923, \$0.823; 1924, \$0.8097.

IMPORTS

The principal imports into Foochow in the order of their importance are flour, kerosene, cotton piece goods and yarn, sugar, coal, leather, slab tin, matches, and beans. The United States supplied nearly 50 per cent of the flour direct and over 7 per cent by transshipment through Hongkong. Of the kerosene the United States supplied over 63 per cent direct, and a portion of the 15 per cent transshipped through Hongkong. The United States supplied over 17 per cent of the dried fish by direct shipment and probably most of the 35 per cent transshipped through Hongkong; also about 4 per cent of the machinery by direct shipment, and at least a considerable portion of the 60 per cent imported through Hongkong and the 33 per cent imported through Shanghai.

It should be noted that the Chinese Maritime Customs, from which source statistics of trade are obtained, credit Hongkong with all goods transshipped at that port, hence it is impossible always to determine the country of origin of imported goods. The leading articles imported in 1913, 1923, and 1924 follow.

Commodities	1913		1923		1924	
	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels	Quantity	Value in haikwan taels
FOREIGN GOODS						
Cotton piece goods:						
Cambrics, lawns, and muslins.....pieces.....	26,786	34,163	8,610	50,789	16,066	89,060
Drills.....do.....	17,751	86,055	2,448	24,069	2,780	28,512
Dyed cottonitalians do.....	21,245	99,047	22,058	294,133	17,885	192,480
Jeans.....do.....	8,897	28,336	8,952	58,738	7,364	51,487
Shirtings.....do.....	9,104	37,805	54,210	341,584	40,997	300,500
T cloths.....do.....	74,252	167,463	21,859	103,991	34,075	179,051
Velvets and velveteens.....yards.....	54,024	14,110	28,058	9,950	11,391	5,296
Cotton yarn.....pounds.....	4,683,866	906,517	76,800	30,216	21,600	7,384
Cigarettes.....thousands.....	5,160	15,328	7,436	32,905	9,536	43,867
Coal.....tons.....	3,779	21,162	11,512	111,750	23,002	208,071
Flour.....barrels.....	79,482	490,716	187,120	1,335,733	175,270	1,240,520
Leather.....pounds.....	117,333	35,193	404,000	137,422	313,896	109,818
Matches.....gross.....	357,858	97,337	25,183	7,997	4,168	2,262
Metals:						
Iron and mild steel.....tons.....	1,550	60,446	1,370	96,665	1,301	169,904
Lead, in pigs.....do.....	661	70,617	638	88,320	587	90,528
Tin, in slabs.....do.....	261	197,758	257	216,949	160	147,333
Kerosene:						
American.....American gallons.....	3,239,827	511,348	3,138,017	1,134,139	2,204,480	564,170
Borneo.....do.....			577,608		307,079	64,645
Sumatra.....do.....			4,412		479,281	82,159
Sugar.....tons.....	2,316	218,923	3,997	799,157	7,380	1,051,400
CHINESE GOODS						
Beans.....bushels.....	262,682	(1)	403,442	(1)	446,909	665,620
Coal.....tons.....	(1)	(1)	30,236	(1)	12,038	105,212
Cotton piece goods:						
Drills.....pieces.....			46,156	(1)	45,580	285,450
Nankeens.....pounds.....	385,200		1,398,133	(1)	1,559,333	233,257
Sheetings.....pieces.....			24,320	(1)	24,836	144,864
Cotton yarn.....pounds.....	1,348,933	(1)	4,445,200	(1)		
Flour.....barrels.....	133,684	(1)	79,925	(1)	446,909	777,126
Matches.....gross.....			209,187	(1)	254,667	95,378

¹ Not available.

The following table of estimated percentages illustrates the distribution of the import trade of the Foochow district, as to points of origin:

Articles	From other Chinese ports	From Japan	From Great Britain	From Hong- kong	From United States
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Beans.....	99.92	0.01		0.07	
Cigarettes.....	97.40		0.15	2.45	
Coal.....	62.15	37.81		.04	
Cotton piece goods:					
Shirtings.....	60.37			39.63	
Drills.....	93.36			6.34	
Jeans.....	98.75			1.25	
T cloths.....	2.32			97.68	
Cambrics, lawns, and muslins.....	54.63			45.37	
Dyed cotton, italians.....	12.38			87.62	
Velvets and velveteens.....	82.95			17.05	
Sheetings.....	100.00				
Nankeens.....	100.00				
Cotton yarn.....	98.95			1.05	
Flour.....	43.33			7.73	48.94
Iron and mild steel.....	68.06	.01		31.73	
Kerosene.....	10.77		10.23	15.24	63.76
Lead, pig.....	54.52			45.48	
Leather.....	15.89	.02		84.09	
Matches.....	99.24	.55		.21	
Sugar.....	6.21	.20		63.59	
Tin, slabs or pig.....	.02			99.98	
Fish, dried and salt.....	27.79	19.73		35.38	17.10
Machinery.....	33.64	3.47		60.04	2.79

MONEY, BANKING, AND CREDIT

BANKS

The following banks handle foreign exchange transactions in the Foochow district:

Organizations	Nationality	Head office	Capital (paid up)
American-Oriental Bank of Fukien.....	American.....	Foochow.....	\$250,000 Mex.
Bank of China.....	Chinese.....	Peking.....	\$60,000,000 Mex. (authorized).
Bank of Taiwan.....	Japanese.....	Taipeh (Formosa).....	60,000,000 yen.
Hongkong & Shanghai Banking Corporation.	British.....	Hongkong.....	\$20,000,000 Mex.

LOCAL CURRENCY

There are in use in the Foochow district no less than 9 distinct currencies, 5 actual and 4 arbitrary.

ACTUAL CURRENCIES

Subsidiary coins consist of copper cash, copper cents, 10-cent and 20-cent pieces, the actual value of which varies with the value of the metal content.

The "clean" Mexican or silver dollar, includes the Chinese Yuan and "dragon" dollar, the Japanese trade yen, the Hongkong silver dollar, etc. These dollars when not struck with a die, or "chopped," as it is called, are called "clean" Mexican dollars.

The "chopped" Mexican or silver dollar, includes all silver dollars of recognized standard which have been "chopped" or struck with a metal die to denote genuineness. These are dealt in by weight only.

The "big dollar" or "clean dollar" paper note is issued as the equivalent of a "clean dollar."

The "tai fu" paper-dollar note is issued as the equivalent of 1,000 copper cash.

ARBITRARY CURRENCIES

The "cheque dollar" is an arbitrary standard adopted by foreign-exchange banks to represent the nominal value of the "chopped" Mexican dollar for banking and exchange purposes. As the actual coins vary considerably in weight and fineness, the banks have adopted the arbitrary fineness of 0.7416 of a Kuping, or pure silver, tael or ounce, for their banking dollar.

The Shanghai tael is an arbitrary standard of value considered as 545.25 grains of silver 0.980 fine, used by the foreign exchange banks of Shanghai in quoting foreign exchange, and hence the basis of most interport banking.

The Foochow tael.—Theoretically this unit is equivalent to 523.5 grains of silver. It is used in some local business transactions.

The haikwan or customs tael represents a standard of 583.3 grains of silver, pure, used by the Chinese Maritime Customs in collecting customs charges.

It may be said as a rough generalization that the livelihood of the people is measured in terms of copper cash, and hence of copper-cash paper notes, that is the "tai fu" currency, while all foreign business and interport trade is measured in terms of pure-silver content, and hence of "cheque" dollars and Shanghai taels. The other currencies are regarded as and have a market value as ratios to these two bases, with the exception of the haikwan tael, which has its one specific use.

CREDITS

Purchases abroad are usually handled by confirmed letter of credit cash against shipping documents, on initial orders. Once connec-

tions are established, credits of 30 to 60 days are usually granted. The local branches of foreign banks can usually give credit information on local importers and exporters.

It is highly advisable that individuals representing themselves as acting on behalf of a principal carry with them or have filed at the consulate their powers of attorney. While a consulate accepts no responsibility for firms it names or introduces, it should be in a position to furnish inquiries with suitable bank references, and with evidence of authority to act.

MERCHANDISING METHODS

Until recently most foreign goods which found their way into the north Fukien market were imported from Shanghai or Hongkong by local merchants, through brokers or through manufacturers' agents in these two centers. There is an increasing tendency to form direct connections abroad, particularly with America. (The consulate will be glad to advise, in specific instances, which of these methods is to be recommended.) The local import and export house is still a useful and sometimes necessary link in the chain, as it simplifies credit arrangements and saves the expense of investigating suitable advertising, storage, and merchandising methods. Manufacturers contemplating a general sales campaign in China would do well, in any case, to do three things: (1) To obtain from each American consulate direct information as to the local situation in the particular line of merchandise and advice as to the best method to adopt to introduce the line in the particular locality; (2) to establish and keep strictly to distinctive brands or marks on which the name and nationality of the producer and of the goods is clearly indicated in Chinese as well as English; and (3) to protect both agents and consumer by definite delimitation of powers granted and of territory to be covered, filing such information at the proper American consular office.

ADVERTISING

In order of effectiveness the advertising mediums of the district may be given as (1) introduction through the Chinese Chamber of Commerce, Foochow, to the trade guild handling the line, and filing of copies of the trade-mark and other brand marks; (2) billboard and handbill posters in Chinese; (3) newspaper advertising.

TRADE ORGANIZATIONS

Either through the Bureau of Foreign and Domestic Commerce in Washington, or from the American consul direct, lists of firms may be obtained. Besides the consulate, specific assistance along certain lines can frequently be obtained from the Foochow branch of the American Association of China; the British Chamber of Commerce, Foochow; and the Chinese General Chamber of Commerce, Foochow. These organizations are frequently helpful in establishing contacts.

TRAVEL FACILITIES

Foochow can be reached by China Merchants Steam Navigation Co., San Pei Steamship Co., and Osaka Shosen Kaisha steamers

from Shanghai, and by Douglas Steamship Co. steamer from Hongkong, Swatow, and Amoy. If advised in advance the consulate will gladly assist in arranging for accommodations and for letters of introduction, interpreters, and other essentials. Representatives of business houses should carry their credentials with them.

HOTELS

There is no regular first-class foreign hotel in Foochow. Comfortable accommodations can generally be obtained, however, with a local British resident, through a letter of introduction. Rates charged are from \$9 (Mex.) to \$12 per day, for room and board. Arrangements should be made in advance from Shanghai or Hongkong by cable.

PROPERTY VALUES AND RENTS

All foreign business houses are located on Nantai Island, a suburb of Foochow situated just across the river, where are also the customs offices, post office, and telegraph offices. In that section property values are relatively high, and suitable business and residential locations hard to buy, or even to rent. A suitable property combining office and residential quarters would cost about \$40,000 (Mex.). Rents are based on an approximate 10 per cent return on the value. It is impossible to give figures for rent of office or warehouse space, as these vary greatly. The only property taxes foreigners pay are a transfer tax at time of purchase, and a voluntary subscription toward the upkeep of roads, sanitation, and lighting, amounting to about the equivalent of \$20 (United States) a year.

LIVING COSTS

Living costs are somewhat less in Foochow than elsewhere in China. Where board and room can be found on a monthly basis, it works out to about the equivalent of \$75 (United States) a month per person. For a family living in a rented house the cost (in United States currency) per month would be about as follows for two in a family: Rent, \$50 to \$60; food, \$40 to \$60; servants, \$30 to \$40; clothes, clubs, fuel, etc., \$30 to \$60; total, \$150 to \$220. For four in a family these expenses would range approximately as follows: Rent, \$50 to \$60; food, \$60 to \$100; servants, \$40 to \$50; clothes, clubs, fuel, etc., \$60 to \$100; total, \$210 to \$310.

There is no school for foreign children in Foochow. Mothers must employ private governesses or teach their own children. There are two foreign clubs, the Foochow Club and the Foochow Recreation Club, with ample facilities for sports and recreation.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

The outstanding changes in trade conditions in the Foochow district in the 10 years 1913 to 1923 are the decline of the tea trade and its replacement by other industries (principally timber and paper), accompanied by a doubling in the total value of the trade; an increased importance of the district as a supplier of food and other raw products to other parts of China; the shifting of the

control of trade from foreign to Chinese hands; the growth of modern-type industries, such as match factories, knitting and weaving factories, leather tanneries, rubber factories, and soap manufactures, and a pronounced increase in the value and number of American interests. Whereas, in 1913, there were but two branches of American firms in Foochow and less than 200 Americans resident in the district, in 1923 there were 10 American firms with either head offices or branches in Foochow, among them being 2 general import and export houses, a bank, 2 insurance companies, and 5 firms handling special lines of import; while there were 429 American citizens resident in the district. The great growth of American missionary enterprise in the district should be noted, as having an indirect though effective relation to the promotion of American trade interests. American goods to the value of about \$2,000,000 (United States) entered the district in 1923, as against less than \$1,000,000 in 1913.

HARBIN CONSULAR DISTRICT

By Consul G. C. Hanson

LOCATION AND AREA

The Harbin consular district includes the Province of Heilungkiang and all that part of the Province of Kirin lying north of a line drawn between the cities of Changchun and Kirin. In general it lies between 43° and 54° north latitude, or approximately in the latitude of Minnesota, the Dakotas, and the southern part of the Canadian Provinces of Manitoba, Alberta, and Saskatchewan. Its area, including that of Barga, Mongolia, is 390,000 square miles; exclusive of Barga it approximates 220,000 square miles. The average annual rainfall is 42 inches; average minimum temperature, 28.4° F.; average maximum temperature, 61° F. June and July are the rainy months; it is generally dry during the rest of the year.

North Manchuria is reputed to have as great a number of sunny days in the year as any other section of the world. The winters are dry and exceedingly cold, with comparatively little snow, while the growing season is short but intense.

POPULATION

The population of the district, according to the Chinese Maritime Customs, is in the neighborhood of 6,000,000; according to the figures of the economic bureau of the Chinese Eastern Railway, in the neighborhood of 11,000,000. Great areas of Heilungkiang Province average scarcely more than one inhabitant to the square mile; Kirin Province is much more thickly populated; and in the region of Harbin the average density is probably 300 per square mile.

CITIES

The leading cities of the district are shown in the following table:

Cities	Population (estimated)	Europeans	Americans	American business firms
Harbin ¹	150,000	100,000	100	32
Fuchiatien.....	200,000	.....	.....	.....
Tsitsihar.....	40,000	.....	.....	.....
Hailar ¹	15,000	3,000	.....	.....
Taheiho ¹	40,000	1,500	4	.....
Manchouli ¹	30,000	20,000	.....	.....

¹ Treaty port where foreigners may reside for trade purposes.

Harbin, on the Sungari River at the junction of the Changchun branch with the main line of the Chinese Eastern Railway, is the distributing center for the trade of North Manchuria, and to a

great extent, under normal conditions, for eastern Siberia. It is the headquarters of the Chinese Eastern Railway and the seat of the government of the railway zone. Harbin is a Russian city.

Fuchiatien is adjacent to Harbin, and is connected with it by a paved road. Its administration is wholly Chinese, and its status as a treaty port is not clearly defined. It is the Chinese center for wheat, beans, corn, barley, and hemp products from the interior. These products are brought in by cart and by river boats.

Tsitsihar is the capital of Heilungkiang Province. It is a Chinese city, and is the collection point for farm products from the fertile Nonni Valley.

Hailar is in reality a Mongolian town. It is a center for the accumulation of wool, hides, raw skins, cattle, sheep, and horses from the Mongolian nomads. Within recent years it has become a large settlement for Cossack refugees from Siberia, who have engaged in farming and cattle breeding.

Taheiho, opposite Blagoveshchensk in Siberia, is a seat of the Chinese Maritime Customs and the principal point of trade between that portion of Manchuria and the Amur district of Siberia.

Manchouli (Manchuria Station) is important mainly as being Manchuria's western gateway into Siberia.

AGRICULTURE

The leading products of the district are beans, wheat, Italian millet, kaoliang, corn, and barley. Beans and wheat are the only ones which enter to any extent into the export statistics of North Manchuria, the other products being largely consumed locally for distillation purposes, as articles of diet, and as cattle feed.

STOCK RAISING

Stock breeding is an important industry in North Manchuria. In 1923 it was estimated that the animals in the district numbered as follows: Large horned cattle, 636,000; horses, 1,879,200; pigs, 2,198,000; sheep, 1,808,200. In 1923, 1,262 horses were exported. Meat exports are becoming increasingly important, approximately 6,000 tons having been shipped abroad in 1923.

FORESTS

Along the western line of the Chinese Eastern Railway forests are found on the Khinghan Mountains, while almost the entire eastern line traverses wooded country. The southern branch contributes only a small proportion of the timber cut in North Manchuria. The principal species are Korean pine (31 per cent), spruce (26 per cent), fir (3 per cent), elm (7 per cent), oak (3 per cent), white birch (5 per cent). Among other species may be mentioned Manchurian walnut, velvet tree, ash, maple, and aspen.

During the first six months of 1924 the district exported approximately 170,000 tons of timber and lumber.

MINERALS AND MINING

Coal occurs at Chalainor, on the Han River near Mergen; Puhai, on the southern line of the railway; at Machiaohe; and near Kia-

musze Station, on the southern line of the railway. The latter deposits contain coal of excellent quality, while the Chalinor coal is a lignite of low grade. The total annual production of coal is approximately 300,000 tons. Practically all of the coal mined is consumed by the Chinese Eastern Railway. The development of the Machiaohe mines is planned, but lack of capital is an obstacle to the development of mining in North Manchuria.

The Chalinor mines are located at Chalinor Station, a distance of 18 miles from Manchuria Station. These are the only coal deposits in North Manchuria utilized at present to any extent. It has been estimated that the total reserve supply of lignite in the explored regions is approximately 19,000,000 to 20,000,000 tons. From 1909 to 1922 these mines were exploited as a concession from the Chinese Eastern Railway Co., but in 1922 the railway began to work the mines itself. Until 1914 the yearly output varied between 96,000 and 160,000 tons, depending upon the demand. It began to increase in 1915, and exceeded 290,000 tons in 1920. In 1923 the output was 180,000 tons. Approximately 70 per cent of the total quantity is consumed by the Chinese Eastern Railway.

Gold.—Gold is washed on the Suifenhö near Sansing and in other places, chiefly on the tributaries to the Amur, where not less than 15,000 men are engaged in the industry. The gold washers, usually with the commonest tools, remove the most accessible metal, and then go elsewhere to do the same. There are no mines of any importance.

Soda.—In the western part of North Manchuria soda is obtained by the evaporation of lake water. The annual production is about 11,000 tons. In 1923, 156,760 pounds were exported.

Other minerals.—No attention has been paid to the production of iron, copper, or graphite. Millstones and brimstone are obtained in quarries near the railway, which also supply building materials for the railway and the near-by towns.

MANUFACTURING

The leading industries of the Harbin district are flour milling, the manufacture of bean oil, and the distilling industry.

Flour milling.—This industry stands first in importance. The amount of capital invested is equivalent to approximately \$10,000,000 in United States currency. About 2,500 persons are employed by the industry. The output is estimated at 150,000 tons. Exports of flour in 1921 were 86,532 tons; in 1922, 42,661 tons; in 1923, 56,332 tons.

Bean-oil industry.—The manufacture of bean oil holds second place. There are in operation 60 steam-power plants and approximately 1,000 small native mills. No estimate is possible regarding the number of employees. The estimated output is 300,000 tons of cake and oil. In 1922, 205,610 tons of cake and 10,480 tons of oil were exported; in 1923, 296,210 tons of cake and 8,920 tons of oil.

Distilleries.—In addition to distilleries of hانشin (a native product), of which there are several hundred, consuming an aggregate of over 100,000 tons of grain annually, there are eight modern spirit distilleries. The total amount of capital invested in the latter is estimated at \$2,500,000 to \$3,000,000. The aggregate capacity of

these distilleries is up to 9,500 gallons daily, or above 2,600,000 gallons annually. The actual output, however, is believed to be less than 800,000 gallons.

All the above branches of manufacturing industry were created by Russians, following the construction of the Chinese Eastern Railway. They have passed through many crises and still suffer from lack of cooperation in the matter of acquiring raw materials, the marketing of their products, and insufficient operating capital.

LABOR CONDITIONS

The majority of laborers in the manufacturing enterprises of North Manchuria are Chinese, while Russians are employed for work requiring responsibility and particular skill. In Harbin there is always a sufficiency of labor obtainable, but enterprises along the line and in the interior often must contract for labor in the south.

The average pay for unskilled labor ranges from \$4 to \$8 a month, including board and lodging, and from \$10 to \$15 a month without board or lodging. Depending upon the location of the particular plant, the pay of a miller (usually Russian) runs from \$62 to \$150 a month; for a machinist, from \$30 to \$150; for an oiler, from \$8.50 to \$15.

Work is performed in double shifts of laborers, who work 8 hours one day and 16 hours the next. In the flour-milling industry there is a decided shortage of skilled workmen, and for this reason employers carry men on their pay rolls even at periods when the mill is closed down. With the exception of workmen employed on the various branches of the Chinese Eastern Railway, employers in North Manchuria provide no compensation for their men in case of sickness or accident, and they are not provided quarters. Strikes are very rare.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

Sungari.—The Sungari River rises in the Chang-pai-shan Mountains. From its source to the city of Kirin, a distance of 330 miles, it is not navigable. Steam navigation is possible only from the city of Kirin. From Sanchiako, the point where it joins the Nonni River, the Sungari is broad and flows through a plains country. From Kirin to Harbin the river is navigable only for ships drawing from 3 to 4 feet of water. East of Harbin it is navigable for ships drawing from 5 to 6 feet of water, but in dry seasons ships drawing above 3 or 4 feet have difficulty in passing the Sansing shallows. The really navigable sections of the Sungari are from Maincheng to Harbin (200 miles) and from Harbin to its mouth (450 miles), or a total of 650 miles.

Amur.—West of the mouth of the Ussuri River the Amur is the boundary line between China and Russia, its right bank being Chinese territory and its left bank Russian. East of the mouth of the Ussuri River the Amur flows entirely through Russian territory. The Amur is one of the great rivers of the world. Ships drawing 12 feet of water can sail up to Khabarovsk, those drawing 10 feet can go to Blagoveshchensk, while those drawing from 4 to 5 feet may go to the mouth of the Argun River, or more than 1,580 miles.

Ussuri.—Ships drawing from 4 to 5 feet of water may navigate the Ussuri River as far as the city of Hulan, a distance of 230 miles from its mouth.

Nonni.—The Nonni River has its source in the Ilehuli Mountains of Heilungkiang Province and flows in a southeasterly direction into Kirin Province, where it empties into the Sungari River. Only very small steamers can sail up this river to Fularki, about 20 miles from Tsitsihar.

Argun.—The Argun, one of the upper branches of the Amur, is an international waterway between China and Russia, its right bank being Chinese and its left bank Russian territory. The river is not navigable except for Chinese junks when water conditions are favorable.

RAILWAYS

The Chinese Eastern Railway has a mileage of 1,078, with spurs to timber concessions aggregating 286 miles additional. The average freight rates per ton-mile range from 3 to 13.9 cents gold.

The Chinese Eastern Railway is the principal means of transportation in North Manchuria. It traverses the entire country from east to west, from Manchuria station (Manchouli) to Pogranichnaia, and connects with the South Manchuria Railway by a branch southward from Harbin to Changchun. It connects the ports of the Pacific Ocean, through its trans-Siberian connections, with the ports of the Baltic and North Seas. The enterprise has been largely instrumental in colonizing this vast territory and in making its resources available to the outside world. It has cemented the scattered agricultural, cattle-raising, and timber regions of the country into one unit. Over the Chinese Eastern come also all imported goods. Its importance, however, is not limited to its rôle of a carrier. Ever since its construction the Chinese Eastern Railway has been the dominant civic factor in the district. It has created cities and towns, over which it administered; it has maintained schools, hospitals, and, until recently, churches. It has been a pioneer in North Manchuria in many branches of industry, with its sawmills, its plant for the dry distillation of wood, its parquet factory, and its plant for the hydraulic press packing of wool and skins. The Chinese Eastern Railway gives employment to approximately 16,000 persons, who represent an important proportion of the buying public.

The Tsitsihar Light Railway, the only other railway line in North Manchuria which carries passengers and freight, is an unimportant, antiquated, narrow-gauge line, with a total extent of 17 miles, connecting Tsitsihar (the capital of Heilungkiang Province) with the station of the same name on the Chinese Eastern Railway.

ROADS

There are no roads in North Manchuria, but overland traffic is carried over trails which existed prior to the construction of the Chinese Eastern Railway. There were three such roads from the south. The oldest ran from Mukden to Kirin, at which point it branched, one route leading to the city of Ninguta and the other to

Potune. At Acheng, an old Manchurian town 25 miles from Harbin, a branch road followed the right bank of the Sungari River through Pinchow to Sansing, and on to Fuchin, near the mouth of the Sungari. Another road originating at the lower course of the Liaoho followed the western bank of this stream as far as Fakumen, crossed the river at Chengchiatun, and entered Potune from the south. From this latter point a direct trail led to Acheng, and another to the city of Tsitsihar. From Tsitsihar the road continued along the left bank of the Nonni River to Mergen, wound its course over the Little Khinghan Mountains, and reached the Amur River at Aigun, opposite the Siberian town of Blagoveshchensk. A third trail crossed the Great Wall at Hsufenko, followed the Khinghan foothills through Mongolian territory, crossed the Taoerho at a point approximately 30 miles west of the city of Taonanfu, and reached Tsitsihar. In addition to these meridional roads there are also transversal trails connecting towns and villages in the district. These are all dirt roads, the surface of which is never repaired; and bridges are built over streams in but few places. Traffic is therefore possible only when the winter frosts harden the swamps and the streams. It is believed that during the winter months, from November to April, approximately 1,000 miles of such roads may be used for motor traffic.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The Chinese Telegraph Administration maintains 96 stations in the district. The rate, in Mexican currency, to Shanghai is 18 cents, and to New York \$1.90.

The Great Northern Telegraph Co. operates as part of the Chinese Telegraph Administration service, with one station. Rates are as above.

The Chinese Eastern Railway has contacts within the railway zone and one telegraph station at every railway station.

Telegrams to New York may ordinarily be forwarded by any of the following routes: The Great Northern Telegraph Co.'s transit route via Siberia-Europe and Atlantic cables; the Eastern Extension Telegraph Co.'s route via Hongkong-Suez and Atlantic cables; the Commercial Pacific Cable Co. via Manila and San Francisco.

The Kirin provincial government maintains contact with Mukden and Dairen, and has one wireless station at Harbin. The Harbin station transmits telegrams to and from wireless stations in Manchuria only and works with the station in Dairen. It also receives news telegrams broadcast from foreign stations.

TELEPHONES

An automatic telephone system was installed at Harbin in October, 1921. It represents an investment of approximately \$600,000 (United States), and gives an annual gross revenue equivalent to nearly \$200,000 in United States currency. On July 1, 1924, it served 2,087 subscribers from one central over 5,936 miles of wire, and recorded a daily average of 35,196 conversations. The system is adapted to serve 3,000 subscribers. A fee of \$100 to \$125 (United States) per annum is charged. This system, the property

of the Chinese Eastern Railway, was installed by an American firm and gives excellent service.

In 1922 the Chinese Eastern Railway improved its interurban telephone system by replacing the former one-line installation by a double-line system. This enterprise operates a total of five separate interurban telephone lines—two on the southern, two on the western, and one on the eastern branch. The automatic telephone at Harbin may be connected with these interurban lines.

A recent project includes the connection of Harbin with Vladivostok by telephone. For this service it is planned to utilize iron wires and repeaters.

POSTAL FACILITIES

In an administrative sense North Manchuria is a separate postal district, the Kiwei district, which was withdrawn from Mukden control in 1921. The district has a total of 238 postal agencies and 118 offices, with head office at Harbin. It has 15 town box offices, 116 rural box offices, 45 rural stations, and 143 stamp-selling agencies. Mail is carried on the Sungari and Amur Rivers between April and October as far as Taheiho, a distance of 900 miles from Harbin, and the rest of the year overland by horses, couriers, and motor trucks. The Chinese Eastern Railway is used all through the year. The mail service is excellent.

SHIPPING AND WAREHOUSING FACILITIES

PORT ACCOMMODATIONS

Harbin and Fuchiatien anchorage and landings are abreast of the port of Harbin and the adjoining native city of Fuchiatien. The Sungari River is not affected by the tides. The depth of water during the navigation season varies from 3 to 6 feet, and the maximum draft of a Sungari vessel does not exceed 6 feet.

The major portion of the river bank is stone faced, and the vessels moor alongside. The Chinese Eastern Railway Co. has a dock excavated inside the normal line of the river bank, situated immediately above the boundary between Harbin and the native city. Railway sidings run along the entire Chinese Eastern Railway berthing places at both river bank and dock. There is no rail accommodation in connection with the native city berthing place. All cargo is carried by coolies, except timber, which is pulled up by hand.

No figures are available relative to the amount of tonnage which enters and clears the port. The approximate tonnage of steamers is known, but that of barges is not, and the latter tonnage exceeds that of steamers. The approximate carrying capacity of vessels which navigated the Sungari during the summer of 1924 is as follows: Steamers, 14,400,000 pounds; barges, 62,280,000 pounds.

The following craft were prohibited from sailing: Chinese Eastern Railways' 11 steamers and 30 barges, with an aggregate carrying capacity of 43,200,000 pounds; 4 steamers and 12 barges belonging to a Russian firm and having an aggregate capacity of 18,000,000 pounds.

CARGO-HANDLING FACILITIES

There are no cranes for handling cargo at Harbin and Fuchiatien bund and railway dock. The average rate of discharge of cargo from barge to railway car is approximately 72,000 pounds per hour; from barge to cart, 83,000 pounds per hour; from barge to Chinese Eastern Railway godown, 65,000 pounds; from barge to railway platform, 126,000 pounds per hour.

The cost of transference of cargo from ship's tackle to port for a distance not exceeding 70 feet from barge to stowage is 3 cents Mex. per bag (approximately 190 pounds); for distances over 70 feet there is a proportionate increase in cost. The bulk of cargo handled at Harbin is timber and grain.

WAREHOUSING AND STORAGE

Warehouses and storage sheds, built of corrugated iron sheeting and ample for present requirements, adjoin the landings. They are generally used for the storage of grain, salt, coal, and timber.

The storage charge for ordinary goods is 15 cents silver per pood of 36 pounds for the first 15 days. The rate for tea is 8 silver cents per pood of 36 pounds for a period of 30 days.

Timber is stored in the usual manner; grain is piled up in pyramid fashion and covered with straw matting. As the climate is very dry during the seasons grain is stored in the open, this simple method does not adversely affect it.

The transfer of cargo from storage to dealer is effected by carts.

The Chinese Eastern Railway makes a bund tax, or wharfage charge, of from one-half to three-fourths of a silver cent per pood of 36 pounds, according to where the vessel is berthed. Steamers are also charged a berthing fee of \$3 Mex. and barges \$2 a day while alongside. There are no fees for anchorage in the stream.

PUBLIC UTILITIES

ELECTRIC-LIGHT PLANTS

North Manchurian Electric Enterprise Co. (Japanese).—Located at Harbin; total capacity, 600 kilowatts; direct current, 110 volts. The plant serves approximately 3,000 subscribers, who pay 40 Japanese sen per kilowatt-hour. The service is very poor.

I. I. Churin & Co. (Russian).—Newtown-Harbin; total capacity, 130 kilowatts; direct current, 200–220 volts. The company serves approximately 1,000 subscribers, who pay 35 Japanese sen per kilowatt-hour. Service is good.

The Chinese Eastern Railway.—Harbin. (a) Railway depot: 2 generators, 130 kilowatts, 220 volts. (b) Harbin railway workshops: 4 alternators, total capacity 116 kilowatts, 25 cycles, 250 volts; 110 volts for lighting. (c) Old Harbin: 2 generators, direct current, 220 volts, capacity 70 kilowatts.

Number of subscribers unknown. Rates vary for railway employees and for private subscribers from 4 silver cents to 40 cents per kilowatt-hour.

The United Manchurian Flour Mills (Russian).—Pristan-Harbin. Five dynamo machines, 450 kilowatt, direct current, 220 volts; steam

engines. Subscribers include one-quarter of the city; charge, 40 Japanese sen per kilowatt-hour.

Yueh Ping Electric Co. (Chinese).—Fuchiatien-Harbin. Two 600-kilowatt turbines; alternating current; 110 volts for lighting, 220 volts for power; charges, 35 silver cents per kilowatt hour for light, 17½ silver cents per kilowatt hour for power. This plant, which is 2 years old, was constructed by an American firm, and gives excellent service.

In addition the Chinese Eastern Railway operates electric-light plants at settlements in the railway zone. Small plants are also in operation in various Chinese cities in the district.

MOTOR-BUS SERVICE

There are no tramways operating in the district, but in Harbin approximately 150 passenger autobuses are doing a good business. Passenger automobiles are also connecting towns in the interior, where they follow the ancient trade routes during the season of the year when frosts have made these roads passable for motor carriages.

EXPORT AND IMPORT TRADE

EXPORTS

The leading exports of the Harbin district are shown in the following table:

Articles	Average, 1911-1913		Average, 1921-1923	
	Quantity	Value	Quantity	Value
	<i>Piculs</i>	<i>Haikwan taels</i>	<i>Piculs</i>	<i>Haikwan taels</i>
Beans.....	5,287,860	10,728,463	5,239,028	13,164,115
Bean cake.....	239,577	280,147	2,730,486	5,763,577
Bean oil.....	41,788	348,424	211,112	1,990,091
Skins (furs).....	590,759	105,363	1,891,599	937,629
Wheat.....	1,695,980	4,073,711	1,748,646	4,084,379

NOTE.—The average value of the haikwan tael, expressed in terms of United States currency, is as follows: 1911, \$0.65; 1912, \$0.74; 1913, \$0.73; 1921, \$0.76; 1922, \$0.83; 1923, \$0.80.

It is interesting to note the marked increase in the export of bean cakes, bean oil, and furs during the period from 1913 to 1923. In the case of bean cakes the increase is due to greater demand from Japan, and in the case of bean oil is due to increased demand for this product in Europe. Disturbed conditions in Siberia and Russia caused the export of Siberian furs to China. Previously such furs were exported to Europe. It is impossible to estimate what percentage of exports goes to various countries abroad, because the Chinese Maritime Customs do not keep statistics of this sort at Harbin.

IMPORTS

Practically no imports are arriving in North Manchuria from Siberia. Changchun is now the principal port of entry of imports into this district, and the Chinese Maritime Customs keep no records of such imports. The principal imports of North Manchuria are

petroleum and petroleum products, Fushun coal, piece goods, machinery of all kinds, railway supplies, perfumery, and drugs. American imports consist of petroleum, piece goods, machinery, tools, canned goods, and motor cars. In recent years German imports have regained a strong foothold in this market. Constant efforts are being made to foster the importation of Russian goods. Since the Chinese authorities assumed control in 1920 over the Chinese Eastern Railway Zone there has been a marked increase in internal taxes, which has had the effect of hampering American and other foreign trade.

MONEY, BANKING, AND CREDIT

BANKS

The following are the leading banks of the district which handle foreign exchange and bills:

Banks	Nationality	Head office	Capital	Branches in district
International Banking Corporation.	American	New York	\$10,000,000 (U. S.)	Harbin.
Chinese-American Bank of Commerce.	Chinese	Peking	\$7,500,000 Mex.	Do.
Hongkong & Shanghai Banking Corporation.	British	Hongkong	\$20,000,000 Mex.	Do.
Russo-Asiatic Bank.	Russian	Paris	45,000,000 rubles.	Harbin, Hailar, Changchun, and Manchouli.
Yokohama Specie Bank (Ltd.).	Japanese	Yokohama	100,000,000 yen.	Harbin, Changchun.
Bank of Chosen.	do	Seoul	50,000,000 yen.	Harbin, Changchun, Kirin.
Bank of China.	Chinese	Peking	\$20,000,000 Mex.	Numerous branches throughout the district.
Bank of Communications.	do	do	1,000,000 Kuping taels.	Do.
Provincial Bank of the Three Eastern Provinces.	do	Mukden	20,000,000 feng piao.	Do.

LOCAL CURRENCY

Business is transacted locally in two currencies—Japanese yen and Chinese local dollars.

The Japanese yen currency consists entirely of bank notes issued by the Bank of Chosen. These notes read, "Payable in gold coin or in Nippon Ginko (Bank of Japan) notes," but actually they are redeemable only in the Bank of Japan notes; and in order to obtain Bank of Japan notes in any quantity it is necessary to present the Bank of Chosen notes at the head office of the Bank of Chosen at Seoul. These notes, however, pass freely as a medium of exchange, and are usually quoted at practically the same value as the yen in Japan. In no case up to the present time has the difference in value exceeded one-fourth of 1 per cent.

The Chinese local dollars consist of bank notes issued by the four principal Chinese banks. These notes were originally redeemable in actual silver dollars, but for the past three years there has been an embargo on the export of silver from Harbin except with special permission of the Chinese authorities, and since April, 1924, the Chinese banks have refused to cash their bank notes with silver dollars for any amounts in excess of \$10 per person. Under these

conditions, of course, the local dollar has to be considered as practically a paper currency, and the rate of exchange against the local dollar in comparison with the Shanghai dollar fluctuated at times during the last three or four months of 1924 down to as low as 35 per cent discount. The fact that it is not freely supported by silver renders it liable to daily fluctuations of 2 to 3 per cent.

Outside of Harbin and the other cities along the Chinese Eastern Railway most of the payments for Chinese products and goods are effected in what is known as "tiao" or "feng piao." These two currencies are entirely on a paper basis and unredeemable at any fixed rate in silver or any other stable currency. It is said that the amount of feng piao issued by the Government bank has run into so many millions that they have lost account of the amount outstanding. The farmers, however, accept only tiao or feng piao in payment for their produce; and it is due chiefly to the demand for these currencies for use in paying farmers that they maintain nominal values. The values, of course, fluctuate from 30 to 40 per cent throughout the year, on account of political conditions and the need of funds by the authorities in control of the issue. The tendency during the past few years has been toward a gradual decline in the value of the two currencies, and so long as it is necessary to issue them to meet military and other expenses their value is likely to decline further.

While it is impossible to estimate the amount of tiao and feng piao outstanding, the amount of local dollar notes outstanding is said to be somewhere in the neighborhood of \$15,000,000 to \$20,000,000. The amount of silver held against these notes is estimated to be not over \$3,000,000 to \$4,000,000.

Remittance charges to Shanghai at the beginning of 1925 amounted to about 8 per cent, but these charges vary considerably.

CREDITS

Owing to business conditions local credits are difficult to obtain, and in the case of loans against real estate and property the interest rate is usually 18 per cent or higher. The Japanese banks are the only institutions which are making advances against real estate to any great extent. It seems to have been their policy in Harbin to give loans freely against land and property, and it is reported that one Japanese organization has loans outstanding to the extent of over 7,000,000 yen against land and buildings.

Loans against local merchandise, with the exception of export and import cargo, are also very difficult to obtain. In this connection, facilities are freely given to reputable firms by the foreign banks at rates of interest which are as low as those prevailing in other ports in China.

Method of effecting export credits.—Export credits are given against railway waybills covering beans and other produce for export, on the understanding that ocean bills of lading will be delivered in a few weeks.

Methods of effecting import credits.—Import credits are arranged on the basis of a cash margin varying from 10 to 25 per cent, against which a banker's letter of credit is opened up in favor of the shipper abroad. The balance of the amount is paid either upon arrival of

the documents or at a certain fixed time after the documents have arrived.

Transfers of funds to the interior Chinese cities and towns are usually very difficult to arrange, and are accomplished chiefly by means of native orders issued by small Chinese private banks and large firms. These orders are supposedly payable on demand, but it is usually necessary to register them with the firm and wait several days before payment is effected.

General suggestions to American manufacturers and merchants regarding credits.—American manufacturers and merchants engaged in business transactions with firms in China should rely to a great extent upon the advice and assistance of a good foreign bank. Naturally, if possible, an American bank should be chosen, as it not only can render the same service as other foreign banks, but it may have a better understanding of the conditions under which the American merchant or manufacturer desires to work.

Firms in China often ask to have goods sent on consignment, or sent out billed for collection with either documents against acceptance or documents against payment. This method of handling bills is satisfactory, provided that the firm ordering the goods is responsible and trustworthy; but there are firms that will take a chance on placing such orders in the hope that a certain market will improve, or at least will not fall. If it should happen that by the time the goods arrive the market has declined, such firms may refuse to take up these drafts and the American merchant may be forced to sell his goods at a loss of 20 to 50 per cent.

American merchants who intrust their foreign business to their local bankers should make inquiries as to the name of the foreign bank which will handle their business abroad. Many banks in America have their foreign business handled by foreign banks of various nationalities, and in some cases there is no doubt that the services of these foreign banks are as satisfactory as though the business had been handled by an American bank in China.

POWERS OF ATTORNEY

The nature of the power of attorney for a representative of an American firm visiting North Manchuria is important. There are various kinds of powers of attorney. Some cover over a printed page, and confer upon the bearer many powers which he will not have the slightest occasion to use, but omit other powers which should be clearly specified. One phrase in particular that results in many misunderstandings as to the powers conferred by the instruments reads somewhat as follows: " * * * and in general to transact whatever other business that may be necessary on behalf of the company." This phrase can not be interpreted to mean that the holder has power to borrow, to sign loan forms, or to sign contracts which obligate the company to certain payments. Therefore, in case American companies wish their agents abroad to have the power to sign drafts, checks, and contracts, to open up accounts, and to borrow on promissory notes or through bank overdrafts, such authority should be specifically stated in the power of attorney.

ADVERTISING AND MERCHANDISING

The following publications constitute the leading advertising mediums of the district:

Newspapers and periodicals	Frequency of publication	Language	Nationality of owner	Date of establishment	Estimated circulation
Russki Golos.....	Morning daily.....	Russian...	Russian.....	1920	1,000
Novosti Zhizni.....	do.....	do.....	do.....	1907	3,000
Zarya.....	Morning and evening daily.....	do.....	do.....	1920	3,000
Tribuna.....	Morning daily.....	do.....	do.....	1924	3,000
Rupor.....	Morning daily.....	do.....	do.....	1922	2,000
Molva.....	Evening daily.....	do.....	do.....	1921	1,500
Pochta.....	Morning daily.....	do.....	do.....	1924	500
Sviet.....	Evening daily.....	do.....	do.....	1924	300
Kopeika.....	Morning daily.....	do.....	do.....	1922	1,000
Harbin Daily News.....	do.....	do.....	do.....	1923	500
Harbin Herald.....	do.....	English...	American.....	1918	500
Commercial Telegraph.....	Evening daily.....	do.....	British.....	1924	100
Ekonimicheskii Vestnik.....	Weekly.....	Russian...	Russian.....	1922	500
International.....	Monthly.....	do.....	Chinese Eastern Railway.	1921	1,500
Harbin Dawning.....	Daily.....	Chinese...	Chinese.....	1918	3,000
Sungari Daily News.....	do.....	do.....	do.....	1923	2,000
	do.....	do.....	do.....	1924	1,000

The first four newspapers mentioned have the widest distribution also in settlements along the railway line. There are no standard rates for advertising, inasmuch as these vary and are always subject to bargaining. The average on a monthly contract would probably be approximately 30 yen for a space 3 by 3 inches. Advertising in North Manchuria is employed only as a means of calling the attention of the buying public to articles in stock, particularly to new shipments received. Indiscriminate distribution of catalogues and pamphlets in languages other than Russian and Chinese is a waste of effort and money.

Harbin is the commercial distributing center of North Manchuria. In this city are located the banks and the head offices of all the important firms doing business in the district. It is the point to which dealers from the interior come to replenish their stocks at the warehouses of foreign as well as of Chinese houses. The winter months are the busiest, because the condition of the roads in the interior then enables merchants to make use of them and the farming population has more leisure and more money.

Business in North Manchuria is in the hands of many nationals, and competition is therefore extremely keen. If a conservative firm can show a net profit of 15 per cent for the year, with the investment turned over three times, it is considered very good. Indent business, which ties up capital for a long period of time, is not in favor, and preference is always given to local stocks. One reason why Russian and Chinese merchants hesitate to order direct from abroad is because foreign exporters do not care to guarantee term of delivery, while local sales contracts often carry a penalty clause covering non-delivery on time. Foreign manufacturers, therefore, with branch offices here which carry stocks, usually dominate the situation.

TRADE ORGANIZATIONS

The leading trade organizations of the Harbin district are the American Chamber of Commerce, Harbin, the objects of which are to protect and extend American business and trade interests, but which is also prepared to arbitrate trade disputes; Harbin Russian Chamber of Commerce (Harbin Exchange Committee), 5 Kitaiskaia Street, Harbin, which issues weekly trade bulletins, and which is connected with organizations of importers and of exporters; British Chamber of Commerce, Harbin; German Chamber of Commerce, Russo-Asiatic Bank Building, Harbin; Chinese Chambers of Commerce of Harbin and Fuchiatien.

TRAVEL FACILITIES AND HOTELS

Railway travel in the district is very comfortable. Interpreters are obtainable at the hotels at reasonable rates. The English language is useful at Harbin, but a knowledge of Russian is almost indispensable.

Living at hotels in Harbin is not desirable owing to high prices and the lack of modern conveniences. There is only one hotel in Harbin where accommodations are fairly good. Both hotel and boarding-house accommodations are poor judged by American standards.

The leading hotels are the Hotel Moderne and the Grand Hotel. The Hotel Moderne is located at 34 Kitalskai Street, Pristan-Harbin. It contains 56 rooms without bath and 39 with bath. It is operated on the European plan only. The owners are Russian. The cable address is "Moderne Harbin." The Grand Hotel, at 42 Sungariski Prospect, Newtown-Harbin, has 49 rooms, all without bath. It is operated on the European plan only. The owners are Russian. The cable address is "Grandhotel Harbin."

PROPERTY VALUES AND RENTS

Property values and rents in Harbin vary with the location, whether in the residential section, business section, or in the suburbs. Office space in the business section, not on the main street, may be had for an average of \$0.25 (United States) per square foot, while the price on the main street would be approximately twice that amount. Charges for warehouse space vary from \$0.01 to \$0.03 (United States) per pood (36 pounds) a day, according to kind of merchandise and the period during which stored. Rent for residential purpose varies widely.

Owing to the peculiar circumstances existing there, American business men desirous of renting or purchasing property at Harbin, should consult with the American consulate before committing themselves in this respect.

Apartment life offers the only fairly comfortable mode of living in Harbin. A good, seven-room apartment may be secured for approximately \$125 (United States) a month. Electric light is not expensive. A fairly good cook is paid \$25 Mex. a month; "boys" are paid \$18 to \$25 Mex. a month, and "coolies" \$10 to \$15 Mex. Japanese maidservants receive \$20 to \$25 Mex. a month.

TAXES AND OTHER ASSESSMENTS

Taxes and other assessments are levied by the Harbin Municipal Council and by the local Chinese police and other authorities. As these assessments are irregular and uncertain, it is difficult to make any comment upon the kinds or amounts of such levies.

CHANGES IN HARBIN TRADE CONDITIONS IN RECENT YEARS

From the outbreak of the war to the end of 1924 many changes occurred in Harbin trade conditions. The declaration of war caused local merchants to realize on their stocks, prices fell, important enemy firms were closed, and many imports stopped. There was a general upsetting of the market. There followed a period of great commercial activity, Harbin merchants becoming the middlemen to supply all Russia, which was isolated on the west and beset by military difficulties. Trade capital greatly multiplied and foreign manufactured goods were imported in large quantities. The revolution in Russia in 1917 checked the boom. The ruble collapsed and foreign trade fell off. Lack of rolling stock, which had been withdrawn from the Chinese Eastern Railway for military purposes in Siberia, led to a condition closely akin to trade paralysis. Neither exports nor imports could be moved except under almost insuperable difficulties. With the fall of the Omsk government in 1919, the Siberian market was entirely lost to Harbin, and in 1920 trade was at a very low ebb indeed.

There was a brief trade revival in the spring of 1921, due to free expenditures of gold in the hands of the Bolsheviks; but when private trade with Siberia was suppressed at the end of 1921, trade depression returned. Good crops and large exports of furs in 1922 caused another trade expansion, but 1,500 business houses failed on account of speculations and the shrinkage of credit. Traffic to Vladivostok was interrupted during the Bolshevik efforts to seize that port. The wet summer of 1923 spoiled local production, but bumper crops in 1924 served to partially restore prosperity.

CURRENCY

For the 10-year period prior to the war Russian rubles had been the commercial currency of the Harbin consular district. Paper money called "tiao," issued by the Chinese banks in Kirin and Heilungkiang Provinces, was also in circulation and fluctuated in value in terms of the ruble. The depreciation of the ruble commenced with the beginning of the war, and the revolution in Russia hastened its downfall. By the end of 1920 the ruble had become valueless and the Chinese dollar and the Japanese yen had taken its place as the mediums of exchange in the railway zone. Attempts are being made to put the Soviet chervonetz on the local market, but the Chinese Eastern Railway, Chinese Postal Service, Telegraph Administration, and Chinese firms and shops are on a silver-dollar basis. At the end of 1924 Russian and Chinese landlords were fixing rent contracts in silver dollars rather than in yen, and Russian shopkeepers and restaurants were generally demanding payment in

silver dollars. Thus the silver-dollar note is gradually replacing the yen note in North Manchuria.

CHINESE EASTERN RAILWAY

Before 1914 the policy of the Chinese Eastern Railway was to develop Vladivostok both for import and for export trade and to discourage local industry. There was only a small exchange of freight with Russia. However, the export of local product, mostly beans, was increasing, and this constituted the principal freight of the railway. The result of this policy was an annual railway deficit, which the Russian Government made up. The deficit was \$2,967,129 (United States) in 1913 and \$2,256,458 in 1914. During the World War the Chinese Eastern Railway became the vital link in the Trans-Siberian system, which connected Russia with Vladivostok, its only outlet to the sea. Much attention was paid to the transportation of military freight and little to local freight. There was a great increase of freight, especially war material. However, local transportation also increased, as Harbin, which was the center of activities, prospered and needed construction material, which arrived as freight. In 1916 imports, principally from the south, increased, while exports decreased. Vladivostok still held its dominant position, but was not so strong relatively to Dairen as formerly. The railway was not able to give cars to its local clients quickly, so cart traffic increased.

Transit freight, which had consisted of war and other materials, ceased and export cargo increased in 1919. The disturbances in Russia, the effects of which were felt in North Manchuria, demoralized the technical condition of the railway, discipline became lax, and transportation diminished year by year, the climax being reached during the latter part of 1919. The Russian Government refused further support, and the railway was receiving worthless paper money. The unsettled political situation at Vladivostok forced export cargo south. Export and import cargo through Vladivostok diminished, while the exchange of freight with the South Manchuria Railway at Changchun increased. In 1916 eastbound freight was double that moving south, while in 1919 the situation was reversed.

The railway carried export cargo, principally local products, over 80 per cent of which was shipped south, and some import cargo, solely from the south. Cart traffic was cutting into the railway's business, and the end of 1920 found the railway in a bad financial and technical situation.

In October, 1920, the Peking Government and the Russo-Asiatic Bank came to an agreement in regard to the temporary management of the railway, and a new board of directors was soon after selected. A new economic bureau started to study the resources of the country and found that many products were not being transported by rail.

An agricultural department was formed, three agricultural experimental stations were opened to encourage agriculture; breeding of dairy cattle was introduced; a veterinary inspection system was installed; a wool-washing plant was erected at Hailar; lumbering was developed by the building of railway sidings; and local industries, such as coal mining and the raising of sugar beets, were promoted.

Commercial agencies were established in 1921 for the purpose of attracting freight. Freight rates were reduced and cart traffic fell off considerably. In the summer of 1922 a traffic agreement was entered into with the South Manchuria Railway.

Some friction arose between the railway and the local Chinese authorities in 1923 regarding the jurisdiction over lands belonging to the railway. An agreement was reached in the fall of 1924, and a new board and general manager were appointed. At the beginning of 1925, when bumper crops had brought increased freight to the railway, 80 per cent of the export cargo was moving south and 20 per cent moving east.

KALGAN CONSULAR DISTRICT

By Vice Consul E. F. Stanton

LOCATION AND AREA

The Kalgan consular district includes the whole of Inner and Outer Mongolia; the special administrative districts of Jehol, Chahar, and Suiyuan; that portion of Chihli Province between the sections of the Great Wall which lie north and south of Kalgan; and also the portion of Shansi which lies north of the southernmost part of the Great Wall. Roughly, the district extends to Siberia on the north and to Manchuria on the east, lying between latitude 40° and 52° N. and between longitude 80° to 120° E. Its corresponding territory in North America would extend from Oregon to Michigan, and would include north and south, the State of Nebraska as well as the Canadian Provinces of Alberta, Saskatchewan, and Ontario. The area of the Kalgan district is thus about 1,500,000 square miles.

Mongolia, the main geographical division of the district, consists almost entirely of an immense upland, geographically considered as two separate regions—northwest Mongolia and the Gobi. Northwest Mongolia is in general a mountainous, well-watered region, of which one section, Urunghai, is a forest country. Where the forests fail there are meadows covered with pasture.

The Gobi region is divided for purposes of description into Outer Mongolia, Gobi proper, and Inner Mongolia. Outer Mongolia comprises the country between the Khanghai Mountains on the west and the Khingan Range on the east, and runs from the Gobi proper northward to the Siberian frontier. Inner Mongolia extends from Kansu to Manchuria, and from the Chinese Provinces of Shensi and Chihli northwestward to the Gobi. The Gobi proper covers an immense stretch of territory, much of which lies beyond the limits of Mongolia. It is true desert—a region of gravel, sand, and rock split up irregularly by low, broad-capped ranges and detached hills much denuded and disintegrated. The altitude varies from 3,000 feet on the east to 5,000 feet on the south and west.

The Gobi is crossed in many directions by caravan routes between China and Outer Mongolia, Sinkiang, and northwest Mongolia; but there appears to be no part of it which is capable of permanent settlement. There are no rivers, and the lakes are few, small, and for the most part brackish. Water is lacking everywhere, except during the short rainy season.

LAKES AND RIVERS

The principal river of Outer Mongolia is the Selenga, which has many tributaries, the chief being the Orkhon. The basin of the Selenga extends from Uliassutai to Urga. Both the Selenga and

Orkhon flow northeastward as far as their confluence on the Siberian frontier, and the Selenga is navigable from this point down to Lake Baikal, a distance of some 200 miles, steamers plying during part of the year to Selenginsk.

The valley of the Kerulen River forms a great national highway across Outer Mongolia. Along a considerable portion of the lower reaches it is unfordable, and there are no boats except at the ferries.

In the trans-Khingan portion of Inner Mongolia there are few rivers of any importance, but of the many lakes, Dalai Nor is the largest. It is about 40 miles around and lies at an altitude of 4,200 feet. It is generally shallow and the ice on the lake does not thaw until the end of April. Its waters are clear, though impregnated with soda.

In southeastern Mongolia, streams are by no means infrequent, and grass grows more or less abundantly; but west of the route from Kalgan to Urga there is a great dearth of water, owing to the small precipitation.

In its curved course around the Ordos Plateau the Yellow River is not subject to inundations, and flows between low, level banks through a populous and well-cultivated valley 20 to 40 miles broad. It is unfordable in any part, is much used by large boats, and could possibly be navigated by the right type of river steamer. The rate of the current is nearly $3\frac{1}{2}$ miles an hour, and the voyage from Paotow upstream to Ningsiafu usually takes 20 to 25 days, whereas from 8 to 10 days is the usual downstream schedule.

CLIMATE

The difference in mean temperature between the northern and southern confines of the Kalgan consular district is marked, the range amounting to as much as 35° F. in the month of January, and averaging 19° F. throughout the year. From October to April Mongolia is practically the center of the high-pressure area prevailing over continental Asia. By May the high-pressure area has moved in a northerly direction, and in June, July, and August the barometer in Mongolia stands at its lowest. At Urga the mean annual temperature is 27° F. and the mean for January is -16° F. An absolute minimum of -45° F. has been reached in January and a maximum of 101° in June. The average rainfall at Urga, typical of northern Mongolia generally, amounts to less than 8 inches, 79 per cent of which occurs in summer. At Kalgan the annual precipitation averages from 10 to 15 inches, the average maximum temperature is 98° F. in July, and the average minimum 6° in January.

POPULATION

The population of Mongolia is estimated at approximately 2,500,000, though no census has ever been taken. The population is densest in the north and west along the Siberian frontier, and in the regions lying close to Manchuria and China proper. The average density of the whole area, however, is somewhat less than 2 to the square mile. The following table gives the estimated area and population for this district:

Regions	Estimated area in square miles	Estimated population	Estimated population per square mile
Mongolia.....	1,370,000	2,500,000	2
Chihli Province north of the Great Wall.....	60,000	7,142,185	119
Shensi Province north of the Great Wall.....	30,000	2,257,961	75
Total for district.....	1,460,000	11,900,146	8

CITIES

Kalgan, by virtue of its geographic position and its rail connections, is the gateway to the vast territory of Mongolia and the regions of Kansu and Sinkiang. Fully 80 per cent of the furs, hides, skins, and other raw products of Mongolia pass through *Kalgan* on their way to China and abroad.

Urga, the capital of Mongolia, is approximately 700 miles north of *Kalgan*. It may be said that practically the whole of Mongolia is commercially tributary to this city. From *Urga* radiate caravan routes to *Kiakhta* on the north, to *Uliassutai* and *Kobdo* in the far west, and to *Kalgan* in the south.

Kweihwating, a city of commercial importance, is now connected by rail with *Paotow* on the Yellow River. The cities of *Urga* and *Kweihwating*, which might be termed subsidiary commercial centers of trade, are linked up with *Kalgan*—by rail in the case of *Kweihwating*, and by motor transport or camel and ox caravans in the case of *Urga*.

The cities of *Kalgan*, *Dolonmor*, and *Chilifeng* were opened to foreign trade by presidential mandate on January 8, 1914. None of these cities contain either foreign concessions or special commercial areas, but foreigners may lease land in them for periods varying from 30 to 50 years. The Chinese authorities have in contemplation the setting aside of a special area for foreigners in *Kalgan*, but as these plans involve certain municipal improvements, the construction of good roads, and effective measures to prevent the recurrence of floods, the lack of funds has thus far prevented the plans from being carried out. In *Kalgan* there are consular representatives of the United States, Japan, and Russia. Russia also maintains a consular representative in *Urga* and is understood to be contemplating similar appointments to other points in Mongolia.

The following table summarizes the more salient facts relating to important cities in this district:

Cities	Estimated population	Europeans	Americans	American firms
<i>Kalgan</i>	75,000	125	15	8
<i>Tatungfu</i>	50,000	7	1	-----
<i>Kweihwating</i>	65,000	8	2	-----
<i>Urga</i>	60,000	2,000	-----	3
<i>Chaoyangfu</i>	35,000	(1)	-----	-----
<i>Chengtehfu</i>	80,000	(1)	-----	-----
<i>Chilifeng</i>	40,000	(1)	-----	-----

¹ Not known.

AGRICULTURE

Of the 1,500,000 square miles comprising the Kalgan district, only a small fraction is devoted to agriculture. Except for small, isolated areas in Mongolia, little of the land has agricultural possibilities. This is doubtless due in part to the scanty rainfall (about 8 inches) and the long, extremely rigorous winters.

The agricultural methods and tools employed are primitive, and the rotation of crops is apparently unknown. In Chahar, Suiyuan, and Jehol the principal crops are wheat, beans, and linseed. Kaoliang and millet are also raised for local consumption, the stalks being used as fodder. Though the amount of wheat produced is considerable, there are but few flour mills in the district and there is in consequence a fairly heavy importation of flour, largely from the United States. Soy beans comprise the bulk of the bean crop, the greater part of which is shipped to Tientsin for export. Chahar produces annually over 2,500,000 bushels of linseed out of a total for the district of approximately 5,000,000 bushels. More than 80 per cent of this crop is exported.

The table below summarizes data relative to the more important crops raised in the district:

Products	Planting season	Harvesting season	Estimated production per acre	Estimated annual production	Percentage consumed locally
			<i>Bushels</i>	<i>Bushels</i>	
Wheat.....	April-May.....	August-September.....	15	36,608,783	50
Beans.....	do.....	do.....	12	10,459,652	30
Linseed.....	do.....	do.....	15	5,229,826	20

LIVESTOCK

The Mongols are a pastoral people, both by necessity and instinct, and have been so for hundreds of years. Their wealth is measured in terms of horses, cattle, and sheep. No systematic attempt to secure statistics of Mongolia's wealth in livestock has ever been attempted; but the estimate below may be considered a fair approximation:

Horses.....	1,840,000
Camels.....	365,000
Horned cattle.....	1,725,000
Sheep and goats.....	11,500,000
Total.....	15,430,000

HORSES

Horses comprise one of the chief forms of Mongolia's natural wealth. The Mongolian horse is generally bay or bay-brown in color, stands from 50 to 59 inches in height, has a big, often hook-nosed head, a short neck, a well-developed chest, and strong legs and back. Rigorous climatic conditions have brought about the

survival of the fittest and produced a strong and enduring, if unpretentious, breed of horses that are regarded as almost indefatigable. The price of an average Mongolian horse varies from \$20 to \$40 (Mex.). Better animals bring up to \$60, while particularly mettlesome amblers or race horses will bring from \$500 to \$1,000. While the Mongol has been generally averse to parting with his horses, increasingly high prices have overcome this attitude and in the past few years an average of 70,000 horses have been exported annually to China. The majority are used for agriculture and general transportation purposes, but probably several thousand are purchased each year for racing and riding.

It is doubtful whether the Mongolian horse could be exported advantageously to foreign countries, but the establishment of breeding farms with good European sires would, it is believed, result in the development of a new type which would find a ready market in foreign countries.

CAMELS

Mongolian camels are estimated at approximately 365,000 head. Estimating each camel to yield an average of about 6 pounds of wool, the yearly output available would approximate 2,200,000 pounds. Of this amount the local population uses approximately 400,000 pounds, leaving an exportable balance of 1,800,000 pounds.

The actual export of camel wool from this district for 1923 amounted to just short of 2,000,000 pounds, over 90 per cent of which originated in Mongolia.

CATTLE

The number of horned cattle in Mongolia has been estimated at 1,725,000 head. The yearly increase approximates 572,000 head, the yearly loss 375,000 head, leaving an approximate net yearly increase of 175,000 head. It will be noted that the yearly loss is extremely heavy. The Mongols make no attempt to protect their livestock from the rigors of climate, but herd them on the steppes the year round. In summer they pasture the animals in localities having water, and in winter they choose places having comparatively little snow, to enable the cattle to get at the grass underneath. Every year a greater part of the newborn perish, while the older cattle which survive diminish in weight from 20 to 25 per cent. Thus neglected, the cattle are subject to many diseases, the commonest of which are rinderpest and epidemic pneumonia. Anthrax occurs, but not to a ravaging extent. In 1910 Russian veterinarians first made inoculations against rinderpest, and in the following years special expeditions for the purpose were sent from Chita, in Siberia. The Mongols had thousands of their cattle inoculated, but political disturbances have interfered with this work in recent years.

Before and during the war, Russia was the chief buyer of Mongolian cattle. In 1916 Russia bought and exported 175,000 head, in 1917, 100,000 head. What percentage of this amount went to China is not known, but over a period of several years the entire increase of Mongolian cattle was consumed abroad. There were years when, in order to satisfy the demand of the Russian and Chinese markets, even the reserve stock was used.

The number of hides available yearly for export is estimated as in the neighborhood of 84,000. Hides are exported mainly via Kalgan and Tientsin, a small quantity going to Japan through Dairen. Compared with pre-war exports, present exports show a considerable decrease. Germany, which formerly was one of the chief buyers, has again entered the market. Lately America and Europe have also increased their purchases, and exports to Japan likewise show an increase. The establishment of leather factories in Manchuria and in the Province of Chihli has resulted in brightening the Mongolian market.

SHEEP

It is estimated that about 800,000 head of sheep are available annually for export. Mongolian mutton, which was formerly exported almost exclusively to Russia, has in more recent years appeared in European markets. In 1918 a British company, appreciating the high quality of Mongolian mutton, began the export of sheep carcasses to London. This firm has established a slaughterhouse at Harbin and is building one at Hailar.

The establishment at Kalgan of refrigerating plants and slaughterhouses of modern type, and the adaptation of railway cars for the transportation of meat to Tientsin and Shanghai would, it is believed, prove a profitable undertaking. Great numbers of sheep can be easily drawn from Mongolia and western China to Kalgan.

It is estimated that 15,960,000 pounds of wool, 500,000 sheep and goatskins and 700,000 lambskins are available annually for export from the Mongolian market. The Mongolian Central Cooperative Society, a commercial organization of the Mongolian government, has been granted a monopoly of the export of intestines. In 1921 approximately 60,000 pounds of salted and 10,000 pounds of dry intestines were exported from Mongolia.

MINERALS AND MINING

The variety of deposits found in the consular district, such as coal, iron, gold, silver, copper, lead, asbestos, and graphite, indicates that Mongolia and those sections of Chihli and Shansi which lie within this district are potentially rich in minerals. The fundamental element required for the development of these resources is adequate transportation. Mongolia is devoid of railways, and until Urga, the capital, is connected by rail with the Peking-Suiyuan line, or a trunk line is constructed into Mongolia, exploitation of the minerals of Mongolia on a large scale is hardly possible.

COAL

The Geological Survey of China has made extensive studies of the mineral resources of northern Shansi and northwestern Chihli. The data given have been obtained from the society's publications.

North Shansi.—The Tatungfu coal field in northern Shansi extends southwest of the city of Tatungfu for approximately 66 miles. Surveys have not extended beyond this point, but it is known that the coal formation reappears some 30 miles farther south. The width of the formation, running southwest from Tatungfu, is about 33 miles. There are two distinct coal series in the formation. The

lower series, Ferro-Carboniferous in age, contains three coal seams which are 5 to 8 feet thick in places, but which are reduced to shale in others.

It has been estimated that approximately 354,000,000 tons have been extracted by old native mining operations and that there remains a reserve of approximately 1,000,000,000 tons.

Suiyuan.—As far as is known the coal deposits in the district of Suiyuan are located in the Ta Ching Shan Mountains north of the city of Kweihwating and north of Saratsi, some 60 miles west of Kweihwating. Bulletins of the Geological Survey of China indicate that the coal in the Kweihwating region is anthracite, with the reserve approximating 100,000,000 tons, while the coal of the Saratsi area is bituminous, with estimated reserves amounting to 300,000,000 tons.

Chahar.—This district is not known to contain any large deposits of coal, but from a list of mines supplied by the Chahar Bureau of Industries, it appears that three "hsien" (districts) to the north-east and northwest of Kalgan contain deposits with, according to Geological Survey estimates, 10,000,000 tons of bituminous coal.

Jehol.—Fields of this district are located in the vicinity of Chih-feng and Chaoyang. The anthracite reserves have been estimated at 80,000,000 tons, and the bituminous at 850,000,000 tons. The coal-mining area conceded to various Chinese companies in this district by the Department of Mines up to 1921 amounted to approximately 76 square miles, an area exceeded by but few Provinces in China.

Mongolia.—Information relative to the coal resources of Mongolia is extremely meager. Coal fields which have so far been discovered lie generally to the west and the east of Urga. The district of Tushetu Khan, approximately 100 miles west of Urga, contains three known coal beds, and it is reported that three more have been discovered. Another coal field is reported in the district of Sain Nain Khan, approximately 350 miles southwest of Urga. The Kobdo district also contains a coal field, while the district of Tzagatu Khan, some 300 miles east of the city of Kobdo, is said to contain two coal fields. Both bituminous and anthracite are said to exist in these fields.

IRON

Iron-ore deposits in the district are reputed to be as great as those of coal. From the data obtainable it appears that the portion of Chihli Province which lies within this district contains one of the largest iron-ore fields in China.

The iron-ore resources of Mongolia are reported to be enormous. It is noteworthy that in the majority of instances iron ore and coal have been found in the same localities. This condition might prove a factor of importance in the development of industrial life in Mongolia. Two iron deposits have been reported in the Tushetu district west of Urga and a third in Tsetsen Khan, some 150 miles east of Urga. A fourth is said to be located in Sain Nain Khan, and a fifth near the Songuin River in the Kobdo district.

In the Hsuanhuafu section of Chihli, the Lungkuan district, northwest of the Peking-Suiyuan Railroad, is particularly rich in iron ore. The geological survey places the ore reserves of this dis-

trict at 49,200,000 tons and the iron content at 26,000,000 tons. The reserves of the Hsuanhuafu district proper are given as 20,000,000 tons, containing 9,600,000 tons of iron, while the Huailai district, 45 miles southwest of Hsuanhuafu, contains 4,000,000 tons of ore with iron content of 2,400,000 tons.

The only known iron-ore deposit in the district of Jehol is in Chaoyang, figures for which are 300,000 tons of ore containing 150,000 tons of iron.

GOLD

The principal gold deposits of Mongolia are found on the Kudara, Kuitun, and Iro Rivers. The Russians were apparently the first to realize the possibilities of gold mining in Mongolia, and surveys of various sections of the country resulted in the securing of concessions and the active exploitation of Mongolia's gold resources. The principal deposits in the territory so far surveyed are easily accessible through Urga on the south, or from Verkhni-Udinsk on the Trans-Siberian Railway, and from Kiakhta on the north. Lack of railroad facilities, however, will continue to act as a deterrent in the exploits of these deposits.

The most important section of the gold area referred to is the Iro River district. One placer deposit in particular, about $1\frac{1}{2}$ miles long, with a width of gravel of 70 to 210 feet and an average depth of $10\frac{1}{2}$ feet, is reported to have yielded as much as \$35 gold per cubic yard.

COPPER

Copper also has been found in different parts of Mongolia, five deposits having been so far investigated and surveyed. The largest deposit in point of area and reserves is located in Sain Nain Khan, where the seam is reported to stretch over a distance of 35 kilometers and where pieces of native ore weighing up to 36 pounds have been frequently found. While detailed information is not obtainable, the surveys by Russian engineers have left little doubt that Mongolia is sufficiently rich in copper to repay exploitation on a large scale—ever having due regard for the transportation problem.

OTHER MINERALS

Other important metals known to exist in considerable quantity in this consular district are silver, lead, zinc, graphite, and asbestos. It has been stated that graphite of excellent quality exists in large quantities in Mongolia, and that two graphite mountains are located on the Kos Gol. The figures below summarize the approximate annual production of the four leading minerals found in the consular district:

Minerals and metals	Approximate annual production	Approximate reserves
Coal metric tons.....	203,000	2,400,000,000
Iron do.....	(1)	28,750,000
Gold ounces.....	56,000	(1)
Silver do.....	17,900	(1)

¹ Not known.

MINES

COAL

Chimingshan Colliery.—Near Hsiahuayuan station on the Peking-Suiyuan railway, 137 miles from Peking. Head office: Peking-Suiyuan Administration, Peking. Capital: \$775,934 (Mex.) of which \$351,102 was paid by the Ministry of Communications and the rest by the Peking-Suiyuan Railroad. Under the administration of the Peking-Suiyuan Railway. Mining area: 36.44 square li.

Peipao Coal Mining Co. (Ltd.).—Head office: 38 Via Marco Polo, Italian Concession, Tientsin. Location of mines: Peipao, Chaoyang, Jehol district. Established in 1921; the railway company inaugurated mining operations in 1918. Capital: \$5,000,000 (Mex.), two-fifths subscribed by the Peking-Mukden Railway and three-fifths by merchants. It is planned to produce 2,000 tons per day of bituminous coal in two years' time.

The Peipao product is good steam coal, suitable for locomotives and marine boilers, and has the reputation of being the best coal along the Peking-Mukden Railway.

Tung Pao Mining Co. (Ltd.).—Office: Tatungfu, Shansi. Location: Pai Chia Wan, Kowchuan, North Shansi. Established in May, 1921; registered August, 1921. Capital: \$3,000,000 (Mex.) subscribed by Shansi merchants in cooperation with Cantonese merchants.

The mines produce two kinds of coal—the navy or smokeless coal on top, and first-class steam coal for locomotives and steamers at the bottom of the coal-bearing series. The company put down 10 shafts and for a while had as many as 3,000 employees.

Pao Feng Coal Mining Co. (Ltd.).—Location: Tatung, Shansi. Established February, 1913; registered July, 1913. Capital: \$600,000 (Mex.).

IRON

Lungyen Mining Administration.—Head office: Huang Shou Yi Hutung, Peking. Established in March, 1919; registered December, 1919. Capital: \$5,000,000 (Mex.), one half subscribed by the Chinese Government and the other half by Chinese capitalists.

SILVER

Jehol Silver Mines.—Location: 45 miles northeast of Chengteh, Jehol. The mines have been worked by the natives for about 75 years. Estimated possible annual output, 75,000 ounces. The Jehol Mines embrace two workings 5 miles apart—the Ku Shan Tze mine and the Yen Tung Shan mine. Output for 1916, 17,000 ounces.

MANUFACTURING

This consular district is of little importance industrially; but development will follow the construction of adequate railroad facilities. The potential mineral wealth of the district affords almost unlimited possibilities for industrial expansion.

The following is a summary of data relative to industries in the Kalgan district:

Industries	Capacity	Approximate number of employees	Approximate capital ¹	Estimated output	Disposition
Mint.....	500,000 coins per day.	500	\$375,000	350,000 coins per day.	Chahar.
Flour mills.....	2,500 bags per day.	100	410,000	50,000 bags per annum.	Local and Peking.
Dairy farming.....		50	100,000		Peking and Tientsin.
Soda refineries.....		90	60,000	1,150,000 pounds per annum.	Local and Tientsin.
Leather.....		28	20,000	10,670 pieces per annum.	Local.
Motor-car bodies.....		60	20,000	35 bodies per annum.	Do.

¹ All given in terms of Mexican currency excepting the first item, which is United States dollars.

The local construction of motor-car bodies is an industry of considerable interest. The industry has sprung up as the result of the introduction of automobiles on the Kalgan to Urga route, and while still conducted on a small scale, is indicative of the possibility of developing new industries in this district. There is a growing demand for bodies produced locally, now that their durability and soundness of construction has been demonstrated. Transportation companies frequently purchase only the chassis and have a body made to order locally. These bodies cost \$125 (Mex.) and represent a saving of \$200 to \$250 (Mex.) on the price of a car delivered in Kalgan complete with body.

LABOR CONDITIONS

Industrialism has barely made its appearance in the Kalgan district and there is, therefore, very little of what might be termed organized or regulated labor. It is only in such lines of industry as mints, flour mills, electric-light plants, telephone companies, and railroad workshops, that wages and working hours have been at all systematized.

With the exception of a union of the employees of the Peking-Suiyuan Railroad, there are no organized labor unions or societies. This union is affiliated with the Union of Railway Laborers and was organized in connection with a strike which occurred on the Peking-Suiyuan line on October 27, 1922.

TRANSPORTATION AND COMMUNICATION

With the exception of the Yellow River, the Kalgan district has no great natural water thoroughfares such as are found in central and southern China. The existing alternative, as represented by caravan routes winding across the desert and mountain, while picturesque, is obviously and increasingly inadequate to meet the growing industrial activities. The most imperative need of this region is the construction of additional railway lines to connect with the approximately 500 miles of railroad which now serve this vast territory. The construction of a main railway line along the present Kalgan-Urga-Kiakhta caravan route is of the utmost necessity to the economic development of this region. The Kalgan consular district undoubtedly presents interesting possibilities, particularly by virtue of its mineral and livestock wealth. Facilities for transportation are, however, indispensable to the inauguration of commercial and industrial prosperity.

WATERWAYS

The only navigable waterway is that section of the Yellow River between Paotow and Ningsiafu, a distance of approximately 500 miles. Sailing boats and rafts constructed of some 20 or 30 goatskin bladders, with a wooden superstructure are used. Attempts were made some years ago to use steam launches, but without success. However, it is believed that with properly constructed shallow-draft launches profitable transportation could be developed. The rafts and boats now plying the river carry from 15 to 20 tons, the rates varying from gold \$20 to \$25 per ton for the voyage. The down-

stream run from Ningsia to Paotow occupies from 8 to 10 days and the return trip 10 to 20 days. No figures relative to the yearly volume and value of goods transported along its railway are available, but it is estimated that Kansu and Sinkiang export yearly 114,000,000 pounds of sheep and camel wool, 6,000,000 pounds of horsehair, 1,500,000 skins, and furs to the value of \$10,000,000 (United States currency). The annual imports are said to include 500,000 chests of tea, 500,000 pounds of sugar, and manufactured goods (hardware, machinery, cigarettes, cotton cloth, and miscellaneous articles) to the value of \$2,000,000 (United States).

These figures are not given as actual values of the annual imports and exports, but merely indicate the commercial possibilities of the region and the importance of the river as a means of transportation. The following table summarizes methods of transportation in the district:

Mediums	Average load	Average mileage per day	Average cost (U. S. currency) per ton-mile ¹
Railways.....	400 tons.....	175	\$0.05
Automobiles.....	2,000 pounds.....	140	.40
Camels.....	260 pounds.....	20	.10
Boats.....	35,000 pounds.....	30	.05

¹ It should be noted that the figures 5 cents per ton-mile on the railway represents the average on second class freight. Cereals by the Peking-Suiyuan Railway are carried at the rate of \$0.03 a ton-mile.

RAILWAYS

In 1905 construction work was started on the Peking-Suiyuan Railway, the only system of rail communication in the district. It was constructed with the surplus earnings of the Peking-Mukden Railway and the cost was approximately \$42,000,000. It is one of the few lines in China built entirely with Chinese capital and by Chinese engineers. The Peking-Kalgan section of the line was open to traffic in 1909. Through passenger and freight traffic between Peking and Suiyuan was inaugurated in 1915, and in 1923 the extension to Paotowchen was completed. The main line is 468 miles in length. A branch to Mentowkow, 16½ miles in length, connects Peking with this important mining district, and another small branch runs from Tatungfu to the coal mines at Kowehuan. The Peking-Suiyuan Railway runs from Fengtai to Suiyuan via Peking, connecting with the Peking-Mukden and Peking-Hankow systems at Fengtai. It forms the natural highway over which millions of dollars' worth of wool, tea, hemp, grain, and coal are annually transported to Tientsin in the east, Kansu and Sinkiang in the west, and Mongolia in the north.

There are no railways now under construction in the district, but several have been projected. In addition to extending the existing line from Paotow to Ningsiafu in the Province of Kansu, a main trunk line has been projected from Kalgan to Urga and thence to Kaikhta, a total distance of approximately 900 miles. Other projected lines in this district are the "Chihli Extra-Mural"

railways: Peking to Jehol, 130 miles; Jehol to Chihfeng, 140 miles; Chinchow to Chihfeng, 190 miles; Kalgan to Dolonnor, 190 miles; Dolonnor to Chihfeng, 130 miles; Chihfeng to Taonanfu, 330 miles. The total approximate length of these lines will be 1,110 miles.

It is proposed to construct these lines from the surplus earnings of the Peking-Mukden and Peking-Hankow lines. It is more than probable, should their construction actually be undertaken, that foreign capital will have to be employed.

ROADS

With the exception of one automobile road between Kweihwating and Paotow, a distance of approximately 120 miles, constructed by the Governor of Suiyuan, there are no roads in this district which have been actually constructed for automobile use. However, it should be noted that the country through which the main caravan routes to Mongolia run is well adapted to automobile traffic. The land is characterized by a series of gently rolling steppes with long stretches of almost perfectly level ground.

There are three main trade routes in the district, over all of which it is possible to use automobiles. The most important one connects Kalgan with Urga, a distance of approximately 750 miles. From Urga the route runs north to Kiakhta on the Siberian border, a distance of approximately 200 miles. This route is practicable for automobile traffic over its entire length. The Kalgan-Urga section sprang into prominence some three years ago with the successful introduction of automobiles on this stretch, and the increasing demand for cars on this run during the last two years has been remarkable. At present there are 200 cars operating between Kalgan and Urga, approximately 75 per cent of which number represents cars engaged in a general passenger and transportation business, while the remainder consists of cars owned by various foreign firms and operated in connection with the conduct of their business in Mongolia.

The second main route, the Kobdo-Uliassutai-Urga-Manchuoli caravan route, the total length of which is approximately 1,450 miles, practically crosses Mongolia from east to west. This is one of the most important trade arteries of Mongolia and connects the important administrative and economic centers of the country. The road is fairly well adapted to automobile traffic and is used by cars to some extent. The utility of the route is restricted, however, by the fact that there are no intermediate supply and repair stations between the cities mentioned. In consequence it is essential for a car undertaking any section of this trip to load up with considerable supplies of oil, gasoline, and other necessities. This dead weight naturally reduces the amount of cargo and therefore renders the operation of cars somewhat unprofitable.

The third route, the Lanchowfu-Ningsiafu-Paotow road, links up Kansu and Sinkiang with Paotow on the Peking-Suiyuan Railroad, and is approximately 650 miles in length. The road between Lanchowfu and Ningsiafu passes through somewhat mountainous country and is not suitable for automobile traffic. From Ningsiafu, however, the road is fairly well adapted to motor traffic.

Of the shorter but fairly important roads, mention should be made of the road approximately 88 miles in length connecting Kalgan with Dolonnor or Lama Miao. From 15 to 20 cars operate on this route at the present time.

TAXES

Certain taxes are levied to maintain some of the roads mentioned. The authorities of Chahar impose a tax of \$25 on private cars, or cars not engaged in a general passenger and transportation business (in which category all foreign-owned cars are included), and a tax of \$50 on all Chinese-owned cars, the activities of which are almost wholly confined to the transportation of passengers and cargo. These charges are collected every time a car, either Chinese or foreign, leaves Kalgan for Urga or Dolonnor. Payment is acknowledged by the issuance of a pass indicating that the road tax has been paid.

These charges are levied for the upkeep of the Kalgan-Urga road, or, rather, the Chinese section of it, from Kalgan to Ude, a small telegraph station about midway between Kalgan and Urga.

TELEGRAPHS AND WIRELESS SERVICE

The telegraph system in the strictly Chinese portions of the district is operated by the Chinese Telegraph Administration. The rates in force, exclusive of Mongolia, are (in Mexican currency) 9 cents a word to stations within the same Province; 18 cents a word to stations in other Provinces; to Shanghai, 18 cents; to New York, \$1.90; and to San Francisco, via the Pacific, \$1.70 a word.

In Mongolia two lines are in operation, constructed by the former Imperial Russian Government, under agreements concluded with China in 1913 and 1914. The first line from Kobdo to Kosh-Agatch, in the Tomsk district, connects western Mongolia with Siberia and Russia. Kobdo and Urga are not directly connected, but telegrams from one point to the other are transmitted by Tomsk, Irkutsk, and Kiakhta. The Mongolian government, however, has already completed part of a line to connect Kobdo with Urga, via Uliassutai. The second line constructed by the Imperial Russian Government links up Uliassutai with Monda on the Siberian border. These two lines were handed over to the Soviet Government by article 10 of the treaty concluded between the present Mongolian Peoples' Revolutionary Government and the Russian Soviet Government under date of November 5, 1921.

The other main system in Mongolia of special significance, in that it links up China directly with Europe, is the Peking-Kiakhta line, since 1908 under the control of the Ministry of Communications. This line runs via Kalgan and Urga, and is by far the most expeditious in China, even to such points as New York City and the Atlantic seaboard. It was partially destroyed during the political upheaval in Mongolia in February, 1921, but was restored in 1922 through the efforts of the Chinese Telegraph Administration. The rate to all European countries via Kiakhta is \$1.45 per word; to New York City, \$1.90; to San Francisco, \$2.15.

There is also a telegraph line running from Urga 400 miles eastward to Sain Peissu, which was partially constructed by Baron

Ungerer and later completed by the Mongolian government. This line, it is understood, will be eventually extended to Manchouli on the Chinese Eastern Railway.

Wireless installation located in Kalgan is controlled by the Ministry of Communications and has a normal range of 600 geographical miles by day and 1,300 by night, with antenna power of 5 kilowatts. It may be used for ordinary commercial purposes at the rate of 9 cents per word for foreign messages and 6 cents per word for Chinese.

Urga has one of the most powerful wireless stations in China. Originally erected for the Chinese Government, it has since been taken over by Mongolia. At present this station is operated by the Mongolian government for strictly administrative purposes, and is very heavily guarded. Its normal range is 1,200 geographical miles and 3,000 miles by night, and has an antenna power of 25 kilowatts. It is possible for the station to establish direct contact with Moscow.

There is a small wireless installation at Kobdo, which is understood to be merely a small receiving and transmitting station.

TELEPHONES

The following table summarizes data relative to telephones in this district:

Location	Operating company	Number of subscribers	Type	Equipment
Kalgan	Kalgan Telephone Co.	450	Manual	Japanese.
Kweihwa	Kweihua Telephone Co.	300	do.	American.
Tatung	Tatung Telephone Co.	250	do.	Do.
Urga	Mongolian Government	300	do.	Do.

POSTAL FACILITIES

The Chinese Postal Administration maintains regular and systematic service throughout the strictly Chinese sections of the district. Postal, parcel-post, and money-order services are maintained at an admirable standard of efficiency. First-class mail from New York reaches Kalgan in about four weeks. The Chinese Postal Administration maintained postal service between Kalgan and Kiakhta, via Urga, prior to the political upheaval of 1921 in Mongolia; but with the inauguration of the Mongolian Peoples' Revolutionary Republic the Chinese were forced to leave, and the postal service maintained by the Mongolian government so far has been inadequate. Biweekly service operates between Urga and Kiakhta at 10 cents United States currency per letter. Pony-express service is maintained west of Urga to Sainchabi and Uliassutai, and east to Sain Peissu.

There is no official mail service between Kalgan and Urga. Mail for Urga at present is carried by either Chinese or foreign motor cars.

A somewhat anomalous state of affairs exists in Mongolia with respect to the postal situation. The agreement concluded between Soviet Russia and Mongolia on November 5, 1921, when Russia

recognized the independence of Mongolia, provided for a special postal and telegraph convention with a view to Russian participation in the establishment of postal and telegraphic communication in Mongolia. On the other hand, the Sino-Russian agreement of May 31, 1924, specifically states, "The Government of the Union of Soviet Socialist Republics recognizes that Outer Mongolia is an integral part of the Republic of China, and respects China's sovereignty therein." Such being the case, China probably would not readily admit the legality of agreements concluded by the Soviet Government with an independent Mongolia relative to the establishment of postal, telegraphic, or other communicative routes in Chinese territory.

WAREHOUSING AND STORAGE FACILITIES

There are no firms in this district engaged exclusively in a storage or general shipping business. There are a number, however, of large grain and general merchandise dealers who have constructed corrugated-iron warehouses for the storing of their goods. American fur and wool merchants make use of these warehouses to some extent, the charges in each case depending upon the service. Climatic conditions in this district are so propitious, however, in both summer and winter that grain, wool, and skins are very generally stored in the open.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

All the more important cities in this district are equipped with electric-light installations.

The North China Light Co. (Ltd.), with a capitalization of \$350,000 Mex., operates a 120-kilowatt power plant in Kalgan. Equipment consists of three-phase alternator, 2,200 volts; also direct-current and reciprocating generators; and one Babcock & Wilcox boiler with heating surface of 873 square feet. The plant was installed by Mitsui Bussan Kaisha. The company proposes to install additional equipment capable of supplying 20,000 lamps.

The Tatung Electric Light Co. (Ltd.) is capitalized at \$200,000 Mex. and operates a 200-kilowatt plant in the city of Tatungfu, in Shansi.

In the city of Kweihwating, Suiyuan, the Kweisui Electric Light Co. (Ltd.), capitalized at \$200,000 Mex., operates a 100-kilowatt plant.

Paotow, the present terminal of the Peking-Suiyuan Railroad, has an electric-light system installed by the Suiyuan-Paotowchen Electric Light Co., and operates a 70-kilowatt plant with 2,000 lamps.

The electric-light plant in Urga, Mongolia, was originally installed by Russians in the early part of 1920. It is understood that the present Mongolian government is contemplating the replacement of this small plant with a new installation, the equipment of which, it is said, will cost approximately \$60,000 Mex. The machinery is understood to be of German make. It is planned to connect up the new plant with a surface coal mine, some 15 miles outside of Urga, by a light railroad.

EXPORT AND IMPORT TRADE

In the opinion of local merchants who have traded in Mongolia and other sections of the consular district during the past 10 years, the introduction of railway traffic, which has brought in foreign merchants to purchase wools, skins, and furs, has increased the export and import trade of this district at least 50 per cent. Comparative figures are not available, but it is estimated that 35 per cent of the trade increase is represented in exported commodities—furs, skins, and wool. While the growth of imported foreign goods has not equaled that of exports, there has been a steadily increasing demand for foreign-made articles of all sorts, a demand which will inevitably expand with the further commercial development of Mongolia.

EXPORTS

Figures below represent exports of the 10 most important commodities through Kalgan for 1923. Figures for the preceding years are not available, but those for 1923 will give a fair idea of this district's exports, in both value and volume.

Article	Quantity	Value (Mexican currency)
Animal scraps for glue.....chín..	5,421,118	271,055
Camel wool.....do.....	1,459,855	109,489
Goatskins.....pieces..	19,589,811	26,446,244
Lambskins.....do.....	422,358	169,943
Linseed.....chín.....	3,408,580	136,343
Live horses.....head..	26,405	1,056,200
Live sheep.....do.....	352,038	2,112,228
Marmot skins.....pieces..	2,356,663	2,191,706
Rape.....chín.....	6,297,620	251,904
Sheep wool.....do.....	18,662,523	802,488
Squirrel skins.....pieces..	1,512,122	2,041,364
Total.....		35,588,964

It is not possible to state accurately what percentage of the products originating in this district is exported to other points in China and what proportion to foreign countries; but the following is a rough estimate:

Article	Percentage to China	Percentage to foreign countries
Camel wool.....	60	40
Goat and lamb skins.....	53	47
Linseed.....	20	80
Marmot skins.....	65	35
Rapeseed.....	34	66
Sheep wool.....	40	60
Squirrel skins.....	53	47

EXPORT DUTIES

Goods originating in Outer Mongolia and not covered by transit pass are subject to a 6 per cent export duty levied by the Mongolian government on the basis of its appraisal of market values, also likin

charges at Kalgan and Chu Yung Kuan on the Peking-Suiyuan Railroad, and 2½ per cent native customs tax at Tientsin. Commodities from Inner Mongolia pay likin at Dolonnor, Kalgan, Chu Yung Kuan, and Tientsin. Produce originating west of Fengchen on the Peking-Suiyuan Railroad pays likin at Fengchen and the native customs at Tientsin.

Foreign firms that ship to Tientsin for export to the United States or other foreign countries obtain from the Chinese Maritime Customs in Tientsin transit passes which exempt their goods from payment of the various likin charges indicated above. The foreign exporter, therefore, pays merely the ordinary customs export tax at Tientsin, except in the case of goods originating in Outer Mongolia, on which he is obliged to pay the Mongolian government's 6 per cent export duty.

IMPORTS

Imports of foreign goods have not yet reached large proportions in quantity or value. They consist mainly of flour, sugar, kerosene, hardware, and miscellaneous toilet and fancy articles. The list below is for 1923:

Articles	Quantity	Value (Mexican currency)	Articles	Quantity	Value (Mexican currency)
Automobiles.....number...	5	\$12,500	Kerosene.....chin.	1,935,600	\$232,272
Automobile tires.....do.....	200	12,000	Matting.....pieces.....	140,790	98,553
Blue indigo.....chin.....	495,600	148,680	Sugar.....chin.....	2,943,930	441,589
Cloth.....bolts.....	504,418	8,024,643	Tea.....do.....	14,006,476	9,804,533
Flour.....chin.....	2,988,580	209,200	Wooden bowls.....pieces.....	432,046	216,023
Gunny bags.....pieces.....	268,647	80,594	Total.....		19,576,885
Hardware.....chin.....	76,400	(1)			
Hemp.....do.....	987,660	296,298			

¹ Not known.

NOTE.—1 chin equals 1¼ pounds; 1 bolt equals about 12 yards.

Of the above total approximately \$1,000,000 represents imported foreign goods. The automobiles imported were all of American manufacture. Probably 80 per cent of the imported flour was American, and approximately 50 per cent of the imported kerosene originated in the United States.

In view of the fact that a large percentage of such imports as tea, sugar, flour, and cloth eventually find their way into Mongolia, it may be of interest to compare the actual figures for 1923 with the estimated import capacity of Mongolia, as estimated by a Russian economist.

Articles		Estimated capacity	Imported in 1923
Cloth.....	yards.....	14,700,000	7,133,016
Flour.....	pounds.....	612,000,000	3,984,773
Sugar.....	do.....	460,000	3,984,773
Tea.....	do.....	30,400,000	18,675,301

Imported foreign goods are subject to a 5 per cent ad valorem tax at the maritime port of entry, and a further 2½ per cent tax,

upon the payment of which goods may be carried into the interior without additional charges. An American exporter can, therefore, land his cargo in Kalgan, Kwei-hwa, or Paotow upon the payment of a total tariff charge of $7\frac{1}{2}$ per cent. Goods sent to Mongolia are subject, in addition, to customs duties levied by the Mongolian government—6 per cent on ordinary goods, 12 per cent on tobacco, and 30 per cent on luxuries.

American exporters entering this market usually grant agencies to a general export and import house in Tientsin. Such Tientsin firms have generally made careful surveys of the North China markets and are in a position to judge the marketing possibilities of any particular commodity.

MONEY, BANKING, AND CREDIT

BANKS

There are no foreign banks and only two important Chinese banking institutions in this entire area. They are the Bank of China and the Bank of Communications, with branches in all the more important cities in this district with the exception of Mongolia. Their revenues are almost entirely derived from short-term loans to merchants or exchange shops and from the remitting of funds from cities in this district to Shanghai, Peking, Tientsin, and Hankow. Loans are generally made on the basis of from 9 per cent to 14 per cent per annum. The remittance rate between Kalgan and Shanghai is usually about 1 per cent, and slightly less to Tientsin. At present there is no reliable banking institution in Mongolia. As a consequence the majority of firms, both foreign and Chinese, make their own arrangements for the remittance of funds. Silver dollars are generally remitted by motor car from Kalgan and Urga, the rates varying from 4 per cent to 20 per cent, depending on their scarcity or abundance.

LOCAL CURRENCY

The local currency situation presents the anomalies and peculiarities to be found in other sections of China. Chinese silver dollars and bank notes were formerly extremely popular in Mongolia, but in 1921, with the inauguration of the Mongolian People's Revolutionary Government, the two Chinese banks operating branch offices in Urga were forced to close up. There has been a marked decline in the volume of Chinese bank notes in circulation in Urga, but the silver dollar continues to be popular and forms practically the only currency accepted in Mongolia at present. The attempts of the Mongolian government to issue and introduce its own paper currency have not so far met with success.

CREDITS

In view of the fact that local Chinese banks are not prepared to handle foreign drafts, letters of credit, etc., foreign firms do banking of this nature through the foreign banks in Tientsin. The great majority of foreign firms, such as fur merchants and general importers and exporters, are merely small branch houses, with head offices located in Tientsin. This is particularly true of the fur firms

doing business in Kalgan and Mongolia. The foreigners sent into this district are fur experts, and as such deal directly with the fur market.

The comprador system is not much in evidence in the Kalgan district. Most firms rely on a well-trained native staff, which establishes the contacts and secures the business that formerly constituted an integral part of the functions of the comprador.

ADVERTISING

The only advertising mediums employed in the district, and perhaps the only advertising forms that could be effectively used, are billboards, posters, pictures, and calendars. The use of these is widespread. There is no tax on advertising, but the placing of posters on public buildings is prohibited. Cigarette companies have instituted most of the advertising used, general merchandise being rarely advertised. The use of the Chinese language is indispensable. Strikingly colored, lively pictures, also catchwords and well-known phrases, should be used as much as possible.

TRADE ORGANIZATIONS

The principal Chinese chambers of commerce in the district are those located in the following cities: Kalgan, Tatungfu, Kweihwatung, and Urga. These organizations represent the business interests of Chinese merchants, and take up questions of commercial policy, as the need arises, with the local officials. In some instances such organizations possess considerable commercial and political influence, but as a rule they do not attempt to exercise their influence.

TRAVEL FACILITIES

Railway travel in the district is confined to the Peking-Suiyuan line. The express trains have both dining and sleeping car accommodations, and the trip from Peking occupies about 6 $\frac{1}{4}$ hours.

Travel to Urga is by motor car, arrangements for which can be made with Chinese transportation companies or with an American firm. The trip averages from 4 $\frac{1}{2}$ to 5 days each way, and single fare varies from \$30 to \$35 gold. The baggage allowance is approximately 40 pounds.

Travelers are advised to call at the consulate, where everything possible will be done to help them establish business contacts and to obtain all pertinent information available.

HOTELS

There are two hotels in Kalgan under foreign management. One, under American management, is opposite the American consulate and a short walk from the railway station. The other, largely patronized by fur merchants in winter, is under Russian management, and its cuisine is largely Russian. Accommodations for travelers in the other cities of the district, except Urga, are limited to Chinese inns, which are fairly clean and comfortable. There are no hotels

in Urga, but two Russian boarding houses accommodate travelers. All are operated on the American plan.

PROPERTY VALUES AND RENTS

The section of Kalgan in which the foreign community chiefly resides lies upon high ground, and is thus not in danger by floods from the river, which divides Kalgan into two sections. This factor and the proposal of the local authorities to continue the development of the district by the construction of roads and bridges have caused land values in this section to increase from \$130 to \$500 (United States) per acre. The offices and residences of the principal foreign firms are for the most part located in the higher section, while the fur firms are located on the other side of the river, close to the fur and wool markets outside the city gates. Land values in the old Chinese town average approximately \$150 (United States) per acre.

Most of the larger foreign firms have acquired land on long-term leases and have constructed their own quarters. Others rent Chinese compounds containing 10 or 15 small rooms, permitting residential and office quarters to be together. A monthly rental for such quarters varies from \$25 to \$60 (United States). The tendency is toward increasing rental values.

In Urga combined business and residential quarters could formerly be obtained for approximately \$50 (United States) per month. The present regulations of the Mongolian Peoples' Revolutionary Government are not such as to encourage the location of foreign firms in Urga.

LIVING CONDITIONS

In such cities as Tatungfu, Kweihwating, and Urga, living costs are considerably less than in Kalgan, but few foreign firms maintain foreign representatives in such cities, though they make frequent trips to these points.

There are no clubs or institutions for recreation in the district. The considerable amount of private entertaining done by the foreign residents comprises practically the whole social life of the port. Automobiles may be hired in Kalgan at \$5 (Mex.) per hour, but on account of the poor roads they are seldom used in the city itself. The usual conveyance is the ricksha at 20 to 25 cents per hour.

NANKING CONSULAR DISTRICT

By Consul John K. Davis

LOCATION AND AREA

The Nanking consular district comprises Anhwei Province, Kiangsu Province north of the Yangtze River, and the districts of Nanking and Chinkiang south of the river. The latitude of the district corresponds with that of South Carolina, Georgia, and eastern Alabama, and its area is approximately 99,000 square miles. The average annual rainfall in the district is 48 inches; average maximum temperature 102° F.; average minimum temperature 13° F. The rainy season is July, August, and part of September, also February, March, and April. The dry season extends from the middle of September to the middle of January.

POPULATION

Estimates by the Chinese Postal Administration give the population of the district as 48,967,529; average density for the consular district, 618 per square mile; Anhwei Province 362; Kiangsu Province 875 per square mile.

CITIES

The population of the principal cities in the district is given in the following table:

City and Province	Population (estimated)	Europeans	Americans	American business firms
Nanking, Kiangsu ¹	400,000	97	419	5
Chinkiang, Kiangsu ¹	102,500	-----	74	3
Wuhu, Anhwei ¹	126,800	28	78	2
Pengpu, Anhwei ¹	70,000	3	2	2
Nantungchow, Kiangsu.....	150,000	5	17	-----
Yangchow, Kiangsu.....	250,000	7	35	-----

¹ Treaty port or voluntarily opened commercial port in which foreigners may reside for trade purposes.

Nanking, the ancient capital of China and the present capital of Kiangsu Province, lies on the south bank of the Yangtze River, 210 miles from its mouth. The treaty with France in 1858 stipulated that Nanking should be an open port, but it was not formally opened until 1899. In conjunction with Pukow on the opposite bank of the river, Nanking is destined to become one of China's foremost commercial and transportation centers.

Chinkiang, situated 60 miles below Nanking at the confluence of the Grand Canal and the Yangtze River, is on the Shanghai-Nanking Railway. It was opened to foreign trade in 1861 and before

completion of the Tientsin-Pukow Railway was an important distributing point. The shift of trade to Nanking has decreased the importance of Chinkiang, although it is still the distributing point for the Grand Canal area in north Kiangsu. Foreign business houses are restricted to the British concession, which is situated on the river front outside the city wall.

Yangchow, 15 miles north of Chinkiang on the Grand Canal, has many wealthy residents but is of little importance commercially.

Nantungchow, in Kiangsu Province, on the north bank of the Yangtze River, approximately 130 miles from Nanking and 100 miles from Shanghai, claims to be the model city of China. Industrially it is the most important town in the district.

Wuhu, in Anhwei Province, is situated on the south bank of the Yangtze River, 60 miles above Nanking. It was opened as a treaty port in 1877. Foreign business houses are located in the foreign settlement, which is under the control of the local Chinese authorities. Wuhu is the most important rice exporting center in China.

Pengpu is located in Anhwei Province on the Tientsin-Pukow Railway where it crosses the Hwai River. Voluntarily opened to trade by China in 1924, it is an important distributing center for the territory served by the Hwai River and its tributaries.

AGRICULTURE

The principal agricultural products of the district, in the order of their importance, are shown in the following table:

Products	Planting season	Harvesting season	Average production per acre	Estimated annual production
Rice.....	April to May 15.....	September to Oct. 15....	1 ton.....	<i>Tons</i> 8,197,167
Wheat (2 crops).....	October and June.....	June and September.....	12 bushels.....	66,663,876
Cotton.....	April.....	August, September, and October.....	14,500 pounds.....	166,667
Beans and peas (2 crops).....	March and June.....	October and June.....	14.11 bushels..	620,000
Peanuts.....	May to June 15.....	October.....	800 pounds.....	12,000
Sesamum.....	April.....	August and September.....	800 pounds.....	5,600 pounds..
Kaoliang.....	do.....	September.....	900 pounds.....	600,000
Corn.....	do.....	June.....	900 pounds.....	240,000

Bushels.

Rice.—The staple food of the Chinese living in Central and South China is rice, and the principal centers of production are found in the Yangtze Valley. There are only four Provinces producing a surplus sufficient for export, and the most important of these is Anhwei, which is situated in the Nanking consular district. The main center of assembly for export is Wuhu, the greatest rice-exporting port in China.

Wheat.—Throughout the Nanking consular district, wheat is an important crop, second only to rice, and is harvested twice a year. A large quantity of wheat flour is consumed annually in this district. The bulk of the wheat harvested is prepared by local mills.

Beans.—In the district many varieties of beans are grown, including several soy types. The local consumption is large. Beans

are used as a human food, as feed for animals, and for making bean oil, bean paste, bean curd, and "soy." The residue after the oil has been pressed out is made into cakes, which are used extensively for fertilizer, both locally and in South China. The oil from the soy bean is used for the manufacture of soap, in cooking, in paints, for lubricating, and as an illuminant.

Cotton.—Kiangsu is one of the two largest cotton-producing Provinces in China, which is the third largest producer of raw cotton in the world. The University of Nanking and the National Southeastern University, both located in Nanking, have done excellent work in the acclimatization of American seed cotton and in developing native varieties by selection. As it has been found that American cotton deteriorates quickly if the seed is distributed direct to the farmers, the practice is to acclimatize the seeds at an experiment station before distribution. The University of Nanking has

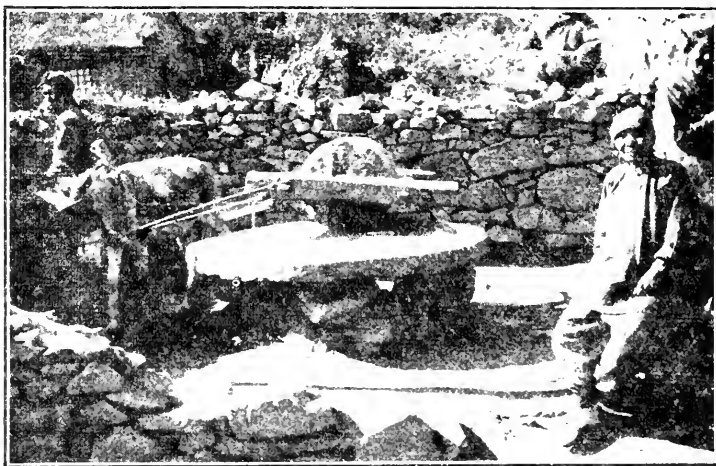


FIG. 24.—The ordinary family gristmill of the country people of China

accomplished remarkable results with its specially developed seed, and has trained many Chinese who now assist in teaching the farmers of the district modern methods of cultivation. Although much locally produced cotton is exported to Japan, the bulk is used in the mills of Nantungchow and Shanghai.

Peanuts.—Kiangsu is one of the chief peanut-producing Provinces in China. Domestic consumption is considerable and the large surplus is exported principally to South China. The value of these exports varies from \$2,000,000 to \$4,000,000, United States currency, annually, but no direct shipments are made from this district to foreign countries.

Sesamum seed, although principally produced in the lower Yellow River Basin, is also grown in this district. For centuries the Chinese farmers produced the seed principally for its oil, which is used as an illuminant, and prior to 1894 the product was raised for local

consumption only. In that year, however, there commenced a foreign trade which in recent years has grown to large proportions. The prosperity resulting from the development of sesamum cultivation was unquestionably due in part to the release of suitable land by the suppression of poppy growing. None of the sesamum produced in this district is shipped direct to foreign countries, but is purchased by large exporters in Shanghai, Hankow, and Tientsin.

Kaoliang (kafir corn or sorghum).—Kaoliang is extensively grown in the northern portion of this district and furnishes the poorer classes with many useful products. Its consumption is exclusively domestic. Practically no portion of the plant is wasted. The grain is used as a food (in the form of porridge and as flour) and in making a powerful alcoholic drink. The stalks are employed in making fences, bridges, in house building, and as a fuel. Before the grain is fully ripe the green leaves are gathered and stored for cattle fodder in the winter, and after the crop is harvested the roots are dug up for fuel.

Corn (maize) is grown throughout the district in the hilly sections. Its consumption is entirely domestic. Spirits are made from the grain, which is also used as a human food and for animal feed. The roots, stalks, and cobs are used as fuel.

MINERALS AND MINING

Iron, coal, copper, sulphur, and phosphate are mined in this district, but only the first two named are worthy of mention. There are considerable deposits of both iron and coal, but those of coal are not extensive and the product is of inferior quality. There are considerable deposits of iron ore both in Anhwei and in Kiangsu. The largest is the Fenghwang deposit near the city of Nanking, which is estimated by British engineers to contain some 30,000,000 tons of good grade iron ore. This deposit is undeveloped.

In this district the mining industry is in its infancy. The methods in general use are primitive in the extreme but once modern processes are adopted the deposits of iron and coal should create large industries. Foreign capital is not welcome and native capital is not yet freely invested in mining enterprises.

In the following table is shown the annual production, extent of resources, and export of iron and coal in 1924.

Minerals	Nature of ore	Annual production	Extent of resources	Exports in 1924
		<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
Iron.....	Good.....	400,000	1 85,000,000	521,634
	Anthracite.....	20,000	70,000,000	.....
Coal.....	Bituminous.....	300,000	225,000,000	55,561

¹ Ore.

IRON

Although there are large iron deposits, the production of ore is very limited. This condition is occasioned by the limited demand for pig iron for domestic consumption and the lack of suitable coal

available for coke production. The local coal does not possess the right qualities and the cost of transportation from the nearest available supply, in Shantung, is prohibitive. The output of the mines depends, therefore, directly upon the iron and steel industry in Japan, to which country practically the entire ore output of the mines is exported.

It is probable that until steel mills are established in this part of China capable of absorbing large quantities of pig iron, the development of the existing iron fields, dependent as it is upon the iron and steel industry in Japan, will be very slow.

At present all mining is by the open-cut method except in the case of very unimportant sedimentary deposits, which supply only native furnaces where smelting is accomplished by means of charcoal.

The Yu Fan Iron Mines are the most important operated in the district. Although operated by Chinese, they are seemingly controlled by Japanese and are stated in the China Year Book to have a contract with the Japanese Government for the annual delivery of 300,000 tons of ore. A light railway carries the ore from the mines to the Yangtze River, a distance of 4 or 5 miles. All equipment is Japanese, and the entire output is exported to Japan, where it is smelted. In high-water seasons shipments are made direct, but during low-water periods transshipment at Wuhu is necessary.

The Pao Hsing Mines, owned and operated by Chinese, are under contract with a Japanese firm to supply iron ore up to a maximum of 50,000 tons annually. It is claimed that there is much iron that can be easily worked, and which is said to contain from 62 to 67 per cent of pure metal, with an estimated iron-ore reserve for the district of 11,000,000 tons, containing 5,000,000 tons of iron.

A railway from the mines to the Yangtze River, a distance of 3 miles, is contemplated, but at present the ore is conveyed by boats to Tsaishihchih, a town on the Yangtze River 6 miles below Taiping.

The Yi Hua Iron Mining Co. was developed quite extensively by Japanese, who established rail connections with the Yangtze River and employed modern appliances. The vein of ore, however, did not turn out to be as promising as was expected, and the venture is reported to be more or less a failure.

Other iron mines in this district are unimportant, and the present demand for ore is not sufficient to warrant any extension of operations.

COAL

Throughout the Provinces of Anhwei and Kiangsu there are numerous small coal mines, but with the exception of the Chiawang mine near the Shantung border, the coal-bearing areas are small, widely distributed, and generally contain coal which is friable, dusty, and high in ash and sulphur. At present the coal mined is of little industrial importance, but it is possible that some method may be worked out whereby, through careful mining and suitable washing, part of the sulphur and ash can be eliminated from the coking coal, thus making it suitable for the blast furnace. Should this occur, the future possibilities for development of both coal and iron would be greatly increased.

Practically all coal in this district is mined very near the surface and without the use of power equipment. There are only two exceptions to this statement.

Chiawang Coal Mining Co., Tungshanhsien, Kiangsu.—The coal obtained from the Chiawang Mine is bituminous and, although it contains a considerable percentage of sulphur, is the best mined. It comes from the most important coal field in this district. The mines are approximately 17 miles northeast of Hsuechowfu near the Shantung border, and are connected with the Tientsin-Pukow line at Liuchuan, a distance of 9 miles, by a light railway. The shafts are sunk 70 feet, reaching four seams of coal, 2 to 9 feet thick. The dip of the seams worked is only about 10°, and it is not yet known whether there is more coal below that depth. The field extends over 10 miles from east to west and 5 miles from north to south. On this basis the probable reserve is estimated at 144,200,000 tons.

Semimodern mining methods are employed, under Chinese organization and control, with a daily production of 500 tons.

Pu Yi Coal Mining Co., Liehshan, Anhwei.—Coal-mining operations have been conducted at Liehshan, "Wolf Mountain" for about 1,000 years. The present company was established in 1915, obtaining possession of properties that had been unsuccessfully worked by two preceding companies. The field is approximately 25 miles northwest of Liehshan and about 15 miles northeast of Fulichi, a railway station on the Tientsin-Pukow line. The company reports an annual net profit of approximately \$300,000 (Chinese currency) for 1919, 1920, 1921, and 1922, with a daily output of 700 tons of anthracite, and 100 tons of bituminous coal. The mines are active and semimodern methods are employed.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

Handicraft industries still predominate in the Nanking consular district, but each year witnesses an expansion of those industries carried on under modern methods, and an increase in the number of modern plants operated. Cotton and flour milling are the principal industries conducted along modern lines, and recently a new cement plant was put into operation. The products of the industries in this consular district, with the exception of processed eggs, are consumed by the China market exclusively.

The manufacturing industries in this consular district are, cotton yarn, with an annual capacity of 114,000 bales, and an estimated output of 80,000 bales; cotton cloth, annual capacity, 220,000 pieces, estimated output, 180,000 pieces; sheetings, annual capacity, 180,000 bales, estimated output, 130,000 bales. These three industries give employment to 10,000 persons and have an approximate capital of \$7,500,000. The flour industry has a daily capacity and output of 21,100 bags, has 1,000 employees, and the approximate capital is \$3,000,000. Egg processing employs 10,000 persons, and has an estimated annual output valued at \$3,000,000. The cement industry has a daily capacity and output of 500 barrels, employs 100 persons, and has an estimated capital of \$600,000. The match factories have an annual capacity and output of 300,000 gross, employ 900 persons, and the approximate capital in the industry is \$900,000.

The handicraft industries furnish such products as silk piece goods, brocades, velvets, gold tapestry, cotton cloth, hand carvings, brass ware, vegetable oils, and tallow (both vegetable and animal).

LABOR CONDITIONS

The wages of male employees in rice mills for a 12-hour day, are from \$12 to \$24 per month; flour mills, male employees, 6-hour day, from \$12 to \$20 per month; egg processing, male and female employees, 10-hour day, 30 cents per day; weaving, male and female employees, 9-hour day, 40 cents per day; knitting, male and female employees, 9-hour day, 60 cents per day.

With the steady upward tendency in the cost of living, there is a corresponding steady increase in the cost of labor which will doubtless continue for several decades. The modernization of industries, while resulting in higher cash wages, is resulting in the lowering of the standards of living and health of the laboring class, since it is taking the workmen away from their homes in villages and towns and is massing them in congested and un-sanitary tenement districts in the cities.

There is very little child labor in the modern industrial plants because the industries found here are not those in which child labor can be used to advantage. Strikes are of rare occurrence and of small importance, and there are no labor organizations worthy of the name.

Labor, while seemingly cheap, is much less efficient than in the United States. Longer hours are observed, but the production per capita is relatively smaller.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The district is well supplied with waterways. The Yangtze River, which flows through it for the last 450 miles of its course, is the center of a network of navigable rivers, canals, and lakes, possessing a total estimated length of 2,000 miles. This system of natural and artificial waterways furnishes the principal means of transport and communication. On the Yangtze River four regular lines of river steamers are operating, as well as many coast and ocean steamers, while numerous small steamers, launches, and junks ply the lesser waterways. The greater part of the passenger and freight traffic in this district is conveyed on this system of lakes and streams.

Passenger fares, in Chinese currency, on the Yangtze River steamers, from Nanking to the principal ports on the Yangtze River, are shown in the following table:

Nanking to—	Fare	Distance	Nanking to—	Fare	Distance
		<i>Miles</i>			<i>Miles</i>
Shanghai.....	\$18	115	Chinkiang.....	\$9	65
Hankow.....	53	370	Wuhu.....	9	50

Freight rates on these steamers vary according to the class of merchandise, but the following rates (from Nanking) per ton, in Chinese currency, will serve to give an idea of their general nature: Nanking to Shanghai, \$5.70; to Hankow, \$7.50; to Chinkiang, \$3.75; to Wuhu, \$3.75.

Ordinary junk freight, exclusive of loading and unloading charges, is approximately \$0.014 per ton per mile.

On the Yangtze River, when shipped between treaty ports, goods are liable to the duties of the Chinese Maritime Customs. On the interior waterways merchandise is liable to inland transit dues, or likin taxes, which average $2\frac{1}{2}$ per cent ad valorem. In addition to the likin taxes there are often many other special levies, such as destination taxes and similar tolls. Goods of foreign manufacture shipped in bulk may avoid likin taxes by taking out transit passes after the payment of transit-pass dues, which amount to one-half of the amount of the original import duty.

RAILWAYS

The followings railways are operated in this consular district (with mileage in district as indicated): Shanghai-Nanking Railway, head office in Shanghai, 45 miles; Tientsin-Pukow Railway, head office in Tientsin, 375 miles; Lung-Hai Railway, head office in Peking, 250 miles.

In conjunction with the excellent system of waterways already described, the two trunk railways which terminate at Pukow and Nanking make these together one of the most important assembly and distribution centers in all China. The Tientsin-Pukow Railway brings down a large volume of beans and cereals, which are either loaded onto vessels at Nanking or ferried across the Yangtze and sent to Shanghai by the Shanghai-Nanking Railway. The Lung-Hai Railway, which crosses the Tientsin-Pukow line at Hsuechowfu, will be, when completed, the longest east-and-west railway line in China and will supply an important agricultural section. There are no other lines of railway under construction.

ROADS

Road construction in the Nanking consular district has in reality but just commenced. There are at present only three long roads or systems of roads constructed—one surrounding the city of Nantungchow, which was built by enterprising Chinese industrialists; one in northern Anhwei, which was made by famine refugee labor with relief funds; and the third in northeastern Kiangsu, which was constructed by an enterprising military administrator. There are no macadamized or concrete country roads in this district, the roads which have been built being entirely of dirt. In the majority of cases roads are not kept up after being built, the native carts and wheelbarrows, with tires for too narrow, tend to cut roads to pieces in very short periods. In northern Kiangsu and Anhwei there are roads which are passible for light motor vehicles, but the absence of bridges and the rapid deterioration of the cars caused by the rough character of the highways prevent rapid development of motor

transport. The main hope for road construction in the immediate future is that semiprivate companies desirous of operating motor transport lines between important points will build their own roads.

The following table gives a summary of the methods of transportation:

Medium	Average load	Average mileage per day	Average cost per ton-mile	Maximum haul
				<i>Miles</i>
Railways.....	35 tons.....	350	\$0.023	233
Steamboats.....	2,000 tons.....	300	.013	450
Junks.....	50 tons.....	10	.015	470
Carts.....	2,666 pounds.....	20	.12	200
Pack animals.....	200 pounds.....	30	.33	200
Wheelbarrows.....	266 pounds.....	20	.30	100
Coolie carriers.....	133 pounds.....	30	.40	100



FIG. 25.—To aid in famine relief a thousand miles of roads were built in China with funds contributed by the American Red Cross

The figures given for the maximum haul for junks, carts, pack animals, wheelbarrows, and coolie carriers are mere approximations. Goods can be conveyed almost the entire width of this district by any of these means, and even a greater distance if necessary. The cost per ton-mile for all carriers but railways and river steamers varies greatly according to the season of the year, the depth of the water in the streams, and the nature of the country and roads traversed. Accordingly, the statements in the foregoing table should be regarded as reliable approximations only.

The average transportation costs on cereals in this consular district works out as follows in silver-dollar currency per short ton per mile: Railways, \$0.023; steamers, \$0.013; carts, \$0.12.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The Chinese Telegraph Administration operates 82 stations in this district and handles messages to any part of the civilized world. Cable messages are forwarded by the administration through the cable company's offices in Shanghai with whom they have agreements. The rate to New York is \$1.95 (Mex.) per word.

There are no commercial or military wireless stations in this district, and the importation of radio receiving and transmitting apparatus is forbidden.

TELEPHONES

The Nanking Telephone Co., in the city of Nanking, is the largest telephone company in the district. It is furnished with American equipment. It has 1,495 subscribers, and the rates are \$6 (Mex.) per month. There are other smaller companies located in various cities in the district.

POSTAL FACILITIES

The Chinese postal service is conducted along modern lines under the supervision of foreigners. Its ramifications extend to every village of importance, and its activities include the transmission of registered, special delivery, and insured mail matter; domestic and foreign parcel-post and money-order services; and a postal savings bank.

An exchange of correspondence between New York and Nanking can be effected in slightly over three months, and letters are often received from New York in 25 days.

SHIPPING AND WAREHOUSING FACILITIES**HARBOR FACILITIES**

Each of the three Yangtze River ports of this consular district open to foreign trade possesses a large harbor which furnishes adequate anchorage. Vessels may enter freely night or day, and the regulations only require that they anchor out of the fairway.

The companies operating regular services have branch agencies at Nanking, Chinkiang, and Wuhu, and have "hulks" or floating wharves, which are connected with the shore by pontoons and which furnish a combination dock, office, and warehouse.

Nanking is the terminus of the Shanghai-Nanking Railway; and Pukow, directly across the river, is the terminus of the Tientsin-Pukow Railway. There are no public docks on the Nanking side of the river, but the Tientsin-Pukow Railway maintains nine pontoons, each 200 feet long, and one wharf 300 feet in length. At all berths there is good water, ranging from 50 to 60 feet in depth during summer months and never less than 26 feet even in winter.

The Tientsin-Pukow Administration has installed on pontoon No. 5 a hand crane capable of lifting 25 tons. With this exception all cargo in the Nanking consular district is handled by hand. The majority of ships calling at Nanking supply their own stevedores, but it is required that all goods moving between the pontoons, warehouses, and trains be handled by coolies employed by the railway company.

In the following table is shown the number and tonnage of vessels entered and cleared through the Maritime Customs at Nanking during 1924:

Flag	Ocean steamers		River steamers		Other vessels		Total	
	Number	Tons	Number	Tons	Number	Tons	Number	Tons
American.....	10	47, 124	82	27, 742	-----	-----	92	74, 866
British.....	112	185, 518	2, 286	4, 200, 486	120	8, 218	2, 518	4, 394, 222
Chinese.....	22	26, 072	1, 626	2, 888, 642	518	41, 478	2, 166	2, 956, 192
French.....	14	62, 736	2	990	-----	-----	16	63, 726
Italian.....	-----	-----	-----	-----	182	13, 072	182	13, 072
Japanese.....	38	55, 658	1, 150	2, 134, 882	456	36, 650	1, 644	2, 226, 890
Norwegian.....	22	26, 458	6	5, 914	-----	-----	28	32, 372
Swedish.....	2	4, 280	-----	-----	-----	-----	2	4, 280
Total.....	220	407, 846	5, 152	9, 258, 356	1, 276	99, 418	6, 648	9, 765, 620

The following table shows the number and tonnage of vessels entered and cleared through the Maritime Customs at Chinkiang during 1924:

Flag	Ocean steamers		River steamers		Other vessels		Total	
	Number	Tons	Number	Tons	Number	Tons	Number	Tons
American.....	16	62, 870	131	37, 909	28	542	175	101, 321
British.....	18	51, 198	2, 044	3, 644, 631	73	4, 985	2, 135	3, 700, 814
Chinese.....	194	210, 870	1, 622	2, 937, 208	527	72, 170	2, 343	3, 220, 248
French.....	-----	-----	-----	-----	2	4	2	4
Italian.....	-----	-----	-----	-----	25	690	25	690
Japanese.....	62	79, 382	1, 142	2, 091, 210	30	2, 074	1, 234	2, 172, 666
Norwegian.....	124	122, 626	-----	-----	-----	-----	124	122, 626
Total.....	414	526, 946	4, 939	8, 710, 958	685	80, 465	6, 038	9, 318, 369

The following table shows the number and tonnage of vessels entered and cleared through the Maritime Customs at Wuhu during 1924:

Flag	Ocean steamers		River steamers		Other vessels		Total	
	Number	Tons	Number	Tons	Number	Tons	Number	Tons
American.....	8	39, 716	52	23, 188	11	169	71	63, 073
British.....	111	148, 715	2, 320	4, 117, 134	76	12, 544	2, 507	4, 278, 393
Chinese.....	39	42, 266	1, 622	2, 911, 886	316	48, 614	1, 977	3, 002, 766
Japanese.....	300	530, 179	1, 150	2, 262, 798	408	100, 112	1, 858	2, 893, 089
Norwegian.....	60	75, 338	-----	-----	-----	-----	60	75, 338
Total.....	518	836, 214	5, 144	9, 315, 006	811	161, 439	6, 473	10, 312, 659

Goods brought into the Nanking-Pukow port are distributed to interior points by the two railway lines, as well as by small steamers, launches, and junks plying the inland waterways. Those imported at Wuhu and Chinkiang are distributed principally by small steamers, launches, and junks.

Owing to the probability of numerous transshipments, rough handling, and danger from pilferage, careful packing in strong, compact containers is essential for shipments to this district. Marking should be distinct and preferably should be placed on the top, one side, and one end of each package.

WAREHOUSE AND STORAGE FACILITIES

Nanking and Pukow each has a warehouse of wood construction with metal roof, having storage space for 3,600 and 8,000 tons, respectively. The rates in Nanking are \$0.05 and at Pukow \$0.015 per ton per day.

In general it may be stated that at all ports in this consular district nothing is ever left outside a locked door unless guarded by responsible employees of the owner or of a transportation company.

The climatic conditions of this section of China render it imperative that perishable goods be shipped in air-tight, water-tight containers.

At Nanking goods are transported in handcarts from warehouses to dealers; in Chinkiang and Wuhu they are moved by wheelbarrows, and by coolies employing carrying poles.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The principal electric-light plants in this district (all under Chinese ownership), with their capacity and rates are shown in the following table:

Location	Capacity of plant	Rates		Equipment
		Per kilowatt-hour	Per 50-candle-power lamp per month	
	<i>Kilowatts</i>			
Anking.....	386	\$0.24	\$3.84	British and German.
Chinkiang.....	380		3.00	British.
Liyang.....	160		2.90	Do.
Lubo.....	40		2.70	German.
Nanking.....	680	.24	2.70	American, German, and British.
Hsiakwan.....	1,000	.24	2.70	American.
Nantungchow.....	125		2.60	Do.
Shihrhwei.....	60		2.80	
Tatung.....	75	.20		Do.
Tsingkiang.....	150			
Wuhu.....	530	.22	2.80	American and German.
Yangchow.....	146		3.00	French.

Considerable extension in electric lighting plants would have occurred during the past few years had it not been for the general political unrest which has frightened capital. When more stable conditions are established it is probable that several existing plants will be enlarged and several new ones built.

WATERWORKS

The Chinkiang Municipal Waterworks, in the British concession in Chinkiang, has a capacity of 12,000 gallons per hour. It is

equipped with two filters, a chlorine plant, and a steam pumping system. Water from the Yangtze River is used. The rates per 1,000 gallons are 50 cents for domestic use and 25 cents for industrial use.

Plans have been made for waterworks in the city of Nanking, but have been indefinitely postponed owing to the disturbed political situation. An American firm has completed a preliminary survey and may eventually obtain the contract when more stable conditions are established.

TRAMWAYS

There are no tramways in this consular district. In Nanking, however, there is a city steam railway from the suburb of Hsiakwan, a distance of approximately 8 miles. This railway connects with the Shanghai-Nanking Railway in Hsiakwan. It may in time be electrified and extended into a tramway system.

CONSERVANCY AND RECLAMATION WORKS

The most important conservancy project in this consular district is the draining into the sea of the Hwai River system of waterways. If successfully accomplished this would prevent the recurrence of the disastrous floods which periodically reduce to famine the most productive sections of northern Kiangsu and northern Anhwei. It would also reclaim many acres of fertile soil which are now covered by a series of small lakes. Plans have been completed for a survey under the auspices of the Hwai Valley Conservancy Board, organized in 1922. The total cost of the undertaking has been estimated at between \$5,000,000 and \$6,000,000 United States currency.

EXPORT AND IMPORT TRADE

The tables in this section cover only goods which arrive or depart on steamers, and which pass through the Chinese Maritime Customs. Reliable estimates indicate that the rail-borne trade is practically as large as the water-borne. This rail-borne trade consists of goods brought to or sent from Nanking by the Shanghai-Nanking Railway and which, being passed through the customs at Shanghai, are consequently included in the returns for that port.

The values (United States currency) of imports and exports through the principal ports in this district are shown in the following table:

Port	Exports			Imports		
	1913	1923	1924	1913	1923	1924
Nanking.....	\$4,357,661	\$14,958,647	\$14,523,929	\$4,828,165	\$11,105,704	\$10,447,339
Chinkiang.....	6,780,322	1,595,004	4,665,738	6,967,760	9,969,791	10,728,037
Wuhu.....	7,394,250	9,408,385	14,523,929	5,378,222	8,065,336	7,768,578
Total.....	18,532,233	25,962,036	33,713,596	17,374,147	29,200,831	28,943,954

EXPORTS

The quantity and value (United States currency) of exports passing through the Chinese Maritime Customs at Nanking, Wuhu, and

Chinkiang, excluding exports by rail, are shown in the following table:

Articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Beans.....tons.....	29,764	\$702,418	14,728	\$515,589	31,914	\$1,411,028
Cereals.....do.....	171,254	5,378,075	77,664	3,283,443	217,737	10,794,449
Eggs and egg products:						
Albumen, yolk and frozen						
.....tons.....	996	259,591	12,524	2,814,886	6,530	2,256,417
Fresh and preserved						
.....thousands.....	12,940		110,514		102,109	948,446
Seeds:						
Rape.....tons.....	4,540	2,244,996	11,249	487,811	10,284	564,346
Sesame.....do.....	21,822		192			
Silk and silk piece goods.do.....	635	2,075,095	676	4,379,103	261½	2,256,840

The increase in the exports of egg products has been brought about by the erection at Nanking of a large British plant in which such products are prepared, and by the enlargement of this plant in the past decade. The fluctuations in the exports of rape and sesame seed have been caused by the varying demands in foreign countries.

There have been no important changes in the routing of exports during the past 20 years beyond the tendency to forward increasingly large quantities of agricultural produce to Shanghai by rail instead of by river steamers. With the exception of egg products and iron ore, there are virtually no exports of importance which are sent direct from this district to foreign countries. Such of the products as are eventually sent abroad are first shipped to Shanghai, and therefore appear under the export figures of that port.

IMPORTS

The quantity and value (United States currency) of the principal imports into this district are shown in the following table:

Articles	1913		1923		1924	
	Quantity	Value	Quantity	Value	Quantity	Value
Cigarettes.....thousands.....	612,921	\$847,384	1,359,402	\$2,323,124	1,231,406	\$2,607,243
Cotton.....pieces.....		5,012,439		5,467,404	1,045,779	5,986,715
Metals and minerals.....tons.....		1,521,515		1,057,973	52,833	2,012,499
Oil, kerosene						
.....American gallons.....	16,964,360	1,593,428	30,022,858	4,657,751	26,573,557	4,882,273
Sugar.....tons.....	52,673	2,934,999	47,678	3,726,687	54,326	5,230,957

The principal changes of importance have been increases in imports of cigarette and kerosene. Owing to the efforts of the large foreign and Chinese cigarette companies, the past 20 years have witnessed a tremendous increase in the use of cigarettes by the Chinese of all classes. The larger imports of kerosene have been brought about by expansions that have occurred in the American and British organizations marketing this commodity, the entry of new companies into the market, and the increased consumption resulting from the abandonment of vegetable oils as illuminants by the Chinese rural population.

The most remarkable change in the sources of cigarettes has been a decrease in imports from Great Britain from 40 per cent of the total in 1903, and 45 per cent in 1913 to only 3 per cent in 1923; and an increase in imports from the United States from 5 per cent of the total in 1903 and 3 per cent in 1913 to 40 per cent in 1923.

The sources of the foreign manufactured cotton goods imported have remained practically unchanged for the past 20 years, although there has been a large increase in the percentage of domestic cotton goods manufactured in modern plants.

The metals and minerals imported in 1923 came from practically the same sources as in 1903 and in 1913. The estimated percentage from the United States, however, has increased from 50 to 70 per cent, and that from Great Britain from 25 per cent in 1903 and 20 per cent in 1913 to 30 per cent in 1923.

Imports of kerosene have come increasingly from the United States. Imports of American kerosene constituted 50 per cent in 1903 and 1913 but in 1923 had risen to 85 per cent. Those from the Dutch Indies, which were 10 per cent in 1903 and 5 per cent in 1913, had practically vanished in 1923. Those from the Straits Settlements and Singapore, which amounted to 20 per cent in 1903 and 15 per cent in 1913, had also almost disappeared in 1923. Imports from Hongkong fell from 15 per cent in both 1903 and 1913 to 12 per cent in 1923.

Owing to the inability of the average Chinese merchant to correspond in any language save his own, and to the absence of American or European general import firms, the best means by which American manufacturers can sell their products here is through agencies established in Shanghai. For firms whose volume of sales will probably warrant the expense, the establishment in the more important ports in this district of branches equipped to handle their own marketing will be found the best method. If the conduct of an export business through these same branches can be arranged, the chances of success will be greatly increased.

MONEY AND BANKING

BANKING FACILITIES

There are in the Nanking consular district no foreign banks, and no Chinese banks which handle transactions with foreign countries. Neither do they supply credit information, nor handle financial investments in the American sense.

The proximity of Nanking to Shanghai and the excellent communications between them makes Shanghai the logical import and export center for the Nanking district. Credits and financial projects generally are, therefore, arranged through Shanghai banks.

LOCAL CURRENCY

The unit of price in all domestic and retail business throughout the district is the Yuan dollar. The Yuan dollar and the Mexican dollar both circulate freely and without discount in favor of either, but the former is rapidly taking the leading place.

ADVERTISING

Local merchants do practically no advertising. The advertising campaigns of foreign firms are supervised and paid for by the marketing organizations of the manufacturers. The majority of advertisements observed are put out by American, European, and Japanese firms. In order of volume, the advertisements deal with cigarettes, cosmetics and toilet requisites, patent medicines, kerosene, and paraffin candles.

Local newspapers are of comparatively slight importance for advertising purposes. The best means of reaching the district through newspapers would be through two Chinese newspapers (Sin Wan Pao and Shun Pao) published daily in Shanghai, but which enjoy a wide circulation in the Nanking district. The most effective form of advertising has been found in the use of posters and painted signboards.

In Kiangsu Province there is a tax on poster advertising which varies according to the size and nature of the posters or signs used. Signboards are taxed 0.06 tael (equivalent to approximately 8½ cents Chinese currency) per square foot per month; while posters affixed to walls are taxed 0.05 tael (7 cents Chinese currency) per square foot per month.

TRAVEL FACILITIES AND HOTELS

There are only two modern hotels in this consular district, both located in Nanking and under British management. The Bridge House Hotel has 30 rooms, and rates are \$7 and up per day for a double room and \$4 and up per day for a single room, American plan. The Yangtze Hotel has 30 rooms, and the rates are \$4 and up per day, American plan, and \$2.50 and up per day, European plan. It is advisable to make reservations at either hotel in advance, for they are often crowded to capacity.

Railway and steamship travel is convenient and comfortable, if care is taken to travel only by express trains and by first-class steamers. Sleeping cars and dining accommodations are found on both the Shanghai-Nanking and the Tientsin-Pukow railways. The commercial traveler should always have his passport as proof of nationality and should have credentials that will establish his connection with the firm or persons represented. A power of attorney clearly setting forth the exact extent of his authority should also be carried.

No language other than English is necessary for traveling by the regular steamship and railway lines, but on any trip into the interior of the district—that is, away from the three treaty ports—an interpreter will be necessary; and bedding, food, and the usual staff of servants should be taken. It is always advisable to call beforehand at the American consulate having jurisdiction over the territory to be traveled.

TRADE ORGANIZATIONS

There are no trade organizations in this consular district that will be of any assistance to the commercial traveler. Each city has a

chamber of commerce, but they make no endeavor to cultivate foreign trade.

PROPERTY VALUES AND RENTS

Land in Nanking, with the exception of the suburb of Hsiakwan, is only slightly more expensive than in other cities of commercial importance, so that the following table will serve to give a fairly general idea of values in this district. Hsiakwan is the most important wholesale and shipping section of Nanking, the Drum Tower area is an educational and residential section, while the Futzemiao is a retail business and amusement district.

Location	Purchase price per unit	Rent of office space	Rent for ware-house space	Rent for residence purposes
Nanking:				
Hsiakwan suburb.....per 100 square feet..	\$25	\$12	\$12	\$12
Drum Tower section.....do.....	20	8	8	10
Futzemiao section.....do.....	15	5	10	10

As compared with the United States or with European countries, taxation in this district is very light. With the exception of the land transfer tax and likin dues, the taxes vary greatly in the different "hsien" or counties, so that it is impossible to give any statement of rates which will hold true even for one Province. Taxes on land, with the exception of the land transfer tax, are remarkably low and vary in each hsien. As a rule, such taxes are levied only on cultivated land and consequently do not apply in cities and towns where land taxation takes the form of taxes on places of business as such, both as a direct "shop tax" and as license dues. Buildings not used as places of business usually escape all taxation. In the case of particular crops special taxes are levied, sometimes based upon the area under production and sometimes upon the estimated yield.

With the exception of missionary societies, Americans may not acquire real property save in ports opened either by treaty or voluntarily by the Chinese Government. In such open ports leases in perpetuity may be obtained with the exception of the newly opened port of Pengpu, in which leases are limited to terms of 30 years. Warehouses and similar buildings may, however, be leased at points other than open ports, although difficulties are often encountered which vary in different localities.

LIVING COSTS

There are in the Nanking consular district no furnished apartments or rooms for rent and no boarding houses. Although a single man or woman can often obtain accommodations in a mess or private residence after becoming known to the people of the port, such accommodations are not generally available.

The rent charged for an unfurnished house of 6 to 8 rooms is from \$125 to \$150 and for one of 8 to 10 rooms between \$160 and

\$240 per month. This is the rent actually paid by American and European residents in this consular district, but the number of houses is so small that in the majority of cases the buildings are rented prior to their erection. All foreign firms maintaining representatives in this consular district furnish them with residential quarters, and all firms that have been established for any length of time own the property in which their employees reside.

In such ports as Nanking, Chinkiang, and Wuhu the foreign communities are small and must of necessity find amusement among themselves. There is considerable entertaining, and there are comfortable clubs, also golf courses and tennis courts.

Nanking is a city of magnificent distances, and the use of a motor car is essential to the transaction of business along modern lines. Practically all firms represented in the city maintain a motor vehicle for the use of their representative. Motor cars may be hired at \$4 an hour.

In Nanking there is an American school for American and European children. This school is supported by the residents.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

The most significant changes in Nanking trade conditions during recent years have been railway connections which have made Nanking and its subport of Pukow the logical assembly and distribution point for this section of China; the gradual but steady change in the standards of living of the Chinese population, which has resulted in increased importation of modern machinery and commodities; the tendency to produce locally modern manufactured products heretofore imported.

The completion of two trunk lines of railway, the Shanghai-Nanking in 1909 and the Tientsin-Pukow in 1912, has radically changed transportation and trade conditions. Goods formerly shipped between Shanghai, Chinkiang, and Nanking by river steamer now go over the Shanghai-Nanking Railway, and a large volume of native produce from Anhwei, Kiangsu, Honan, and Shantung has been diverted to Pukow by the Tientsin-Pukow Railway. The completion of these lines and the construction of the eastern extension of the Lung-Hai Railway has resulted in large imports of locomotives, rolling stock, machinery, and general railway supplies.

The erection of a number of new electric-light plants, and the enlargement of those already existing, has caused a considerable growth in the import of electrical supplies, while the completion of a number of flour mills in this district and the development of cotton mills in Shanghai and elsewhere has resulted in an increase in the consumption of domestic products and a corresponding decrease or lack of increase in imports of foreign flour and cotton goods.

SWATOW CONSULAR DISTRICT

By Vice Consul Gordon L. Burke

LOCATION, AREA, AND CLIMATE

The Swatow consular district has an area of 17,000 square miles and comprises that part of Kwangtung Province in southeastern China lying east of meridian 115° E. and between parallels 22° 40' and 25° N. Its latitude thus corresponds with that of central Mexico.

The climate is subtropical, with an average temperature of 70° F.; the average minimum temperature is 64° F. and the average maximum 76°. The annual average rainfall is about 74 inches. The rainy season extends from February to July; the remainder of the year is dry.

POPULATION

The estimated population is about 8,000,000, with an average density for the district of, roughly, 470 to the square mile. With the exception of six principal cities, the population is mainly rural.

CITIES

The leading cities of the district are shown in the following table. There are eight American business firms in Swatow, but none in any of the other cities listed in the table.

Cities	Popula- tion (esti- mated)	Euro- peans	Ameri- cans	Cities	Popula- tion (esti- mated)	Euro- peans	Ameri- cans
Swatow	100,000	250	55	Chenghai	100,000	-----	-----
Chaochowfu	300,000	10	13	Kityang	60,000	-----	10
Chaoyang	250,000	3	-----	Kaying	60,000	10 6	9

¹ Swatow is the only port of the district open to foreign trade.

AGRICULTURE

The three leading crops of the Swatow district are rice, sugar, and oranges. Two crops of rice are produced during the year. The first crop is planted in April and harvested in June and July; the second is planted in July and harvested in November and December. Production ranges from 20 to 70 piculs per acre. The entire crop is consumed locally and is not sufficient to supply the demand. Swatow oranges are known all over China for their excellence, and the sugar produced in the district is preferred by the Chinese on account of its flavor. The greater part of the sugar and oranges produced is exported. Other crops grown in the district are sweet potatoes, peanuts, jute, vegetables, and tobacco.

MINERALS AND MINING

Coal, iron, lead, tin, wolfram, and bismuth are the principal minerals found. There are no mines such as are familiar to the western mind, but small amounts of the various minerals named are mined by primitive native methods. The slump in prices of steel-hardening alloys after the war brought to almost complete standstill the investigation and production of minerals in the Swatow district.

Coal occurs in the Kayingchow region. The product is anthracite, between 75 and 83 per cent carbon. It is generally mixed with Hongay anhracite for use in native industries, such as burning lime and distilling samshu.

Iron is found in the Kayingchow region and is generally made into cooking pans. In 1923, \$147,969 worth of these pans were exported.

Lead occurs in the Mei, Chengping, and Fungshun districts. The production is used locally.

Tin is produced in small amount in Kityang for the manufacture of tin foil for native consumption.

Wolfram and bismuth occur in several places, but especially in the Kityang region. These minerals were exported in large quantities during the war, but exports have fallen off greatly in more recent years.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

There is little manufacturing in the Swatow consular district. There are two match factories in operation—the Chao Shan Yao Hua Match Co., and the Ming Sing Match Co. The Chao Shan Yao Hua Match Co. has an estimated capital of about \$50,000 gold. It employs 250 workmen, and has an approximate output of 20 cases per day. The Ming Sing Match Co. is capitalized at about \$25,000 gold. This company employs 150 workmen and has an output of 15 cases per day. The products of these two factories are consumed locally and in the surrounding districts.

There are a few small canning factories, whose products are exported mainly to the South Seas. Native industries comprise the manufacture of sugar, chinaware, grass cloth, joss paper, ramie thread and yarn, tinfoil, and bamboo ware; the drying and preserving of fruits; and the expressing and exporting of oil from imported peanuts. The making of drawn work, laces, embroideries, nankeens, native fancy cloth, and the canning of fruits have reached considerable proportions in recent years.

Foreign industries are few, the principal ones being a small ice plant and a soda-water plant operated by British interests. There appears to be little immediate opportunity for foreign industries in this district.

LABOR CONDITIONS

Labor conditions generally were very good in 1923. Wages were increased proportionately to meet increases in the cost of living, and there were few strikes. Female labor is employed by the match and canning factories. The working day varies from 8 to 10 hours, and the woman worker's daily wage from 25 to 45 cents silver.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The section of the Han River from Chaochowfu to Samhopa, a distance of about 70 miles, is navigable for motor launches. The Yung River is navigable for steam launches from Swatow to Kityang, about 36 miles, and navigation is extended in summer to Meeou, 20 miles beyond. Motor launches also run from Kweisu via Chaoyang, a distance of about 40 miles. In addition to the inland launch traffic there are large seagoing launches which connect Swatow with Ungkung to the north and Swabue to the south.

In accordance with the several treaties, foreign goods shipped into the interior under transit passes are free from likin and other dues.

RAILWAYS

In the district there are two minor railways with head offices at Swatow. These are the Chaochow & Swatow Railway (26 miles) and the Swatow-Changlin Light Railway (10 miles). Little freight is transported by these two lines, freight generally being moved by water.

ROADS

The only modern roads are in the cities of Swatow and Chaochowfu, and these are but 8 miles in length. There is an ever-growing movement for widening the streets of the cities, but no suggestions for developing country roads. There is practically no automobile traffic.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

Swatow has no cable connections with other ports. The Chinese Telegraph Administration operates land wires, but owing to political disturbances recent communication has been uncertain. Telegrams for Shanghai are usually mailed to Hongkong and cabled from there.

Military authorities operate the only wireless station, through which communication can occasionally be had with Hongkong, Foochow, Waichow, and with ships at sea.

TELEPHONES

There are two interurban telephone lines in the district, the principal one connecting Swatow with Chaoyang and Kityang, a distance of about 116 miles. Three other short lines, two of them privately owned, are also operated. The Swatow Telephone Co. (Chinese) claims 400 subscribers, operates the manual magneto system, and charges \$5 to \$6 Mex. per month per instrument. The company is capitalized at \$120,000 Mex. Its equipment is chiefly Japanese, but some of the telephones are American and Swedish.

POSTAL FACILITIES

The Chinese Postal Service covers the district. Parcel-post packages for the United States are accepted and money orders issued

payable in America. Mail is routed via Shanghai or Hongkong, and requires about 30 days between Swatow and New York.

SHIPPING AND WAREHOUSING FACILITIES

The principal firms in Swatow maintain their own wharves and pontoons for transferring cargo. Many ships, however, anchor in midstream and transfer cargo from lighters. The depth of water at mean low tide is 4 to 7 fathoms.

Following is a table of the shipping movements at Swatow for 1923, exclusive of innumerable local boats:

Classes and flags	Entered and cleared		Classes and flags	Entered and cleared	
	Vessels	Tonnage		Vessels	Tonnage
Ocean steamers:			Ocean steamers—Contd.		
American.....	22	88,486	Russian.....	6	2,678
British.....	2,460	3,301,304	German.....	4	4,580
Dutch.....	61	149,589	Portuguese.....	2	224
French.....	18	24,432			
Japanese.....	670	760,986	Total.....	3,563	4,660,662
Norwegian.....	78	89,642			
Chinese.....	222	206,169	Launches.....	26,202	360,735
Chilean.....	2	1,522	Junks.....	107,976	2,125,452
Danish.....	18	31,050			

The three principal shipping companies control a storage capacity of upwards of 60,000 tons. Their warehouses, however, are designed for their own cargo, though their trade practices include free storage for varying periods. All southern trade is on ex-ship delivery terms, and in such cases Chinese consignees generally store in their own or public native godowns. Cargo is carried by coolies from landing to godowns.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The five electric-light plants in the district may be summarized as follows:

Swatow-Kaiming Electric Light Co.—Location, Swatow; Chinese owned; kilowatt lighting load, 1,700 to 1,800 amperes, night; rate, 25 cents Mex. per unit, less 5 per cent for over 100 units; plant operated by steam engine; equipment, German and British.

Chaochow-Chongming Electric Co.—Location, Chaowchowfu; Chinese owned; rate, \$2 Mex. monthly per lamp of 25 candlepower; operated by steam engine; equipment, American and British.

Chaoyang Electric Light Co.—Location, Chaoyang; Chinese owned; equipment, German, and consisting of one Banz motor, one 75-kilowatt dynamo (alternating current).

Kwang Yao Electric Light Co.—Location, Kayingchow; Chinese owned; rate, \$2 Mex. per lamp; capacity 60 K.V.A.; equipment, American.

Hingning Hsing Kuang Electric Light Co.—Location, Hingning; Chinese owned; rate, \$2 Mex. per lamp; capacity, 40 K.V.A.; equipment, American.

WATERWORKS

The Swatow Waterworks Co. (Ltd.) has a service reservoir of 800,000 gallons, and a pumping station near Ampow. Its equipment is British. Rates are 3 cents Mex. per 10 gallons.

OTHER PUBLIC WORKS

There are no tramways in the district and no conservancy works except those bound up in the Han River Conservancy Bureau and the Swatow Bund Construction Bureau, neither of which is active.

EXPORT AND IMPORT TRADE

The following tables show Swatow's foreign trade for the years 1903, 1913, and 1923. Values are in United States dollars.

	1903	1913	1923
Imports of foreign goods:			
From foreign countries.....	\$8,781,829	\$14,681,075	\$23,231,795
From Chinese ports.....	269,576	361,521	2,339,750
Total foreign imports.....	9,051,405	15,042,596	25,571,545
Reexports of foreign goods:			
To foreign countries.....	30,845	132,110	200,350
To Chinese ports.....	6,468	89,751	157,646
Total reexports.....	37,313	221,861	357,996
Net total foreign imports.....	9,014,092	14,820,735	25,213,549
Imports of Chinese products.....	11,755,201	14,140,390	25,666,748
Reexports of Chinese products:			
To foreign countries.....	334,138	912,892	1,645,282
To Chinese ports.....	32,116	71,379	60,903
Total Chinese reexports.....	366,254	984,271	1,706,185
Net total Chinese imports.....	11,388,947	13,156,119	23,960,563
Exports of Chinese products of local origin:			
To foreign countries.....	2,977,308	5,133,002	8,594,329
To Chinese ports.....	4,646,678	4,376,927	7,754,961
Total exports of local origin.....	7,623,986	9,509,929	16,349,290
Gross value of the trade of the port.....	28,430,592	38,692,915	67,587,583
Net value of the trade of the port.....	28,027,025	37,486,783	65,523,402

NOTE.—In 1903 the haikwan tael equaled \$0.64 in United States currency; in 1913, \$0.73; and in 1923, \$0.80.

TRADE OF SWATOW BY ARTICLES

Principal articles	1903		1913		1923	
	Quantity	Value	Quantity	Value ¹	Quantity	Value
EXPORTS						
Bags of all kinds..... number.....	2,398,597	\$61,370	867,907	\$41,510	1,963,089	\$133,658
Bamboo and bamboo ware..... value.....		38,863		140,144		157,344
China ware (not pottery and earthenware)..... tons.....	1,876	88,863	4,541		9,541	835,819
Cloth:						
Native, fancy..... number.....					156,660	290,436
Nankeens..... pounds.....	1,218,400	372,278	337,200	93,617	1,853,466	578,282
Clothing, Chinese, and boots and shoes..... value.....		78,413		106,659		141,150
Cuttl fish..... tons.....	177	28,996			193	155,011
Drawnwork on grass cloth..... value.....						680,302
Eggs, fresh and preserved..... number.....	35,537,139	166,520	28,558,370	172,565	44,886,000	359,677

¹ Values for imports of native goods (except medicines) in 1913 are not available.

TRADE OF SWATOW BY ARTICLES—Continued

Principal articles	1903		1913		1923		
	Quantity	Value	Quantity	Value	Quantity	Value	
EXPORTS—continued							
Fishing nets.....pounds..	198,000	\$34,593			516,533	\$171,789	
Flour, potato.....tons..	3,650	82,938	4,425		4,788	201,078	
Fruits, dried and preserved.....tons..	318	3,560	4,755	\$293,180	6,743	651,346	
Garlic.....do..	2,896	27,766	2,957		6,010	109,612	
Grass cloth.....pounds..	644,933	343,610	852,933	668,269	1,080,533	787,529	
Iron pans.....tons..	884	29,689	1,221		1,528	101,158	
Joss sticks.....do..	1,713	104,147	1,512	99,340	1,361	122,794	
Laces.....value						261,198	
Oil, peanut.....tons..	578	55,311	1,272	176,840	3,577	665,297	
Oranges, fresh.....do..	7,246	136,842	13,000		9,084	545,044	
Paper:							
Joss.....do..	3,646	491,156	3,738	1,465,194	6,767	1,623,952	
Other.....do..	5,246	485,499	7,225		78,929	1,382,393	
Persimmons, dried.....do..	1,410	67,699	974		1,500	95,738	
Samshu.....do..	635	37,327	905	51,545	1,177	96,032	
Samshu, medicated.....do..	638	47,306			1,284	117,694	
Sugar:							
Brown.....do..	39,389	1,455,679	28,956	1,458,536	43,733	2,361,574	
White.....do..	28,068	1,568,788	8,827	676,606	5,138	456,248	
Thread and yarn, ramie.....pounds..			1,549,200		1,595,866	282,502	
Tin foil.....tons..	124	81,166	186		199	223,203	
Tobacco, prepared.....do..	1,850	490,971	2,086		2,071	795,238	
Turnips, dried and salted.....tons..					4,512	119,305	
Umbrella, paper.....number..	133,116	8,280	173,733		667,671	106,827	
Vegetables, fresh, dried, and salted.....tons..	12,927	106,121	16,699		12,858	139,442	
IMPORTS OF NATIVE GOODS							
Beans:							
Black.....tons..	3,735	102,797	48,320		4,423	206,990	
Green.....do..	7,089	196,655			8,088	436,759	
White.....do..	48,865	1,320,008			4,905	182,481	
Yellow.....do..					37,792	1,723,290	
Bean cake.....do..	169,346	3,221,402	203,921		215,170	8,908,021	
Cigarettes.....do..					447	364,582	
Coal.....do..	2,250	7,200			48,841	390,728	
Cotton goods:							
Drills.....number..					20,322	80,029	
Sheetings.....do..	6,835	17,277	14,980		25,506	99,941	
Yarns.....pounds..	400	38	6,667		15,147,600	2,555,024	
Cotton, raw.....tons..	285	50,175	819		599	244,210	
Dates, black and red.....do..	874	37,297			1,230	134,805	
Fibers:							
Hemp.....do..	4,546	472,181			1,041	187,332	
Ramie.....do..			4,193		3,634	843,370	
Fish, dried and salted.....do..	585	31,663			1,454	109,663	
Flour, wheat.....do..			817		5,508	353,361	
Fungus.....pounds..	300,533	44,832			269,733	161,840	
Peanuts.....tons..	6,678	190,308	7,214				
Peanut, kernels.....do..					13,876	1,100,164	
Horns, deer, young.....pairs..	542	17,450			1,300	106,460	
Lily flowers, dried.....tons..	485	45,448			435	93,874	
Matches.....gross					1,169,212	298,574	
Medicines.....value		59,224		210,880		409,120	
Oil, peanut.....tons..	522	50,629			1,143	171,490	
Rice and paddy.....do..	131,993	3,719,162	49,687		34,366	1,649,552	
Samshu.....do..	2,266	143,590	4,207		3,791	386,642	
Seeds, melon.....do..	407	22,625			740	93,274	
Tea, green.....pounds..	764,533	80,655	2,000		1,396,533	185,467	
Tobacco, leaf and stalk.....tons..	846	46,067	1,464		1,742	174,936	
Vermicelli and macaroni.....tons..	1,905	117,293	2,128		2,343	393,624	
IMPORTS OF FOREIGN GOODS							
Bags of all kinds.....number..	87,669	2,897	2,424,530	64,305	3,178,405	114,538	
Bicho do mar.....pounds..	352,800	37,080	364,266	64,837	386,000	84,315	
Cereals, rice and paddy.....tons..	357	10,214	6,663	231,424	188,701	9,567,960	
Cigarettes.....number		3,800	9,791,000	18,169	54,392,000	97,206	
Clothing, hats, etc. (not including hosiery, etc.).....value		3,618		305,493		191,314	
Coal.....tons..	62,343	194,873	65,175	287,896	51,166	275,020	

TRADE OF SWATOW BY ARTICLES—Continued

Principal articles	1903		1913		1923	
	Quantity	Value	Quantity	Value	Quantity	Value
IMPORTS OF FOREIGN GOODS—continued						
Cotton goods:						
Shirts—						
Gray, plain, number.....	114,496	\$224,536	102,424	\$228,916	76,496	\$347,275
White, plain, do.....	257,850	681,702	174,447	528,161	70,484	422,809
Plain cotton prints, do.....					25,078	94,792
Dyed cottons, plain, colored—						
Italians, number.....	2,462	11,338			22,910	175,399
Venetians, do.....			43,897	132,832	15,992	168,126
Poplins, do.....					11,526	119,916
Lastings, do.....	562	2,180			44,726	338,464
Dyed cottons, figured, poplins, number.....					14,149	166,746
Yarns, pounds.....	19,299,865	1,954,496	20,841,466	2,900,737	1,274,533	477,955
Thread on spools, gross.....	19,658	27,124	48,124	64,239	291,326	364,384
Dyes, colors, and paints:						
Aniline, value.....		18,378		50,377		166,687
Indigo, artificial, tons.....			482	190,215	222	146,614
Dyes and colors, unclassified, tons.....		5,347	1,114	86,934	1,103	117,298
Fish and fishery products, tons.....	11	676	4,710	592,459	7,985	1,111,234
Flour, do.....	4,101	164,102	16,566	761,873	16,531	992,291
Ginseng, pounds.....	43,300	65,465	17,275	37,027	20,955	175,396
Leather, do.....	155,333	19,094	446,933	107,131	770,666	212,754
Linen goods and mixtures, yards.....	607	113	12,090	2,559	213,008	130,067
Machinery and parts, value.....		3,645		19,811		92,663
Manures, tons.....	116	2,220	496	12,117	2,992	202,629
Medicines, value.....		102,925		195,325		214,322
Metals and minerals:						
Tin in slabs, tons.....	710	338,319	750	371,000	1,039	835,088
Tinned plates, do.....	589	35,195	809	60,751	2,688	387,561
Milk, condensed, in tins, dozens.....	10,132	11,046	27,921	35,897	2,254	103,893
Oil, kerosene, gallons.....	4,728,930	420,780	5,950,950	673,129	5,575,013	1,323,158
Paper, tons.....	259	26,458	1,019	92,011	1,436	178,185
Soda, do.....	364	10,393	1,220	43,022	1,671	94,731
Spirits of wine, gallons.....	991	499			305,160	141,728
Sugar:						
White, tons.....	709	34,376	5,237	336,077	5,118	644,801
Refined, do.....	1,078	69,034	3,605	240,825	3,536	455,502
Umbrellas, number.....	10,991	4,998	126,407	55,680	161,453	102,876
Wax, paraffin, tons.....	42	4,083			921	99,075
Wool and cotton unions:						
Coatings and suitings, yards.....					157,335	138,722
Wool and cotton unions, unclassified, yards.....			55,119	18,855	138,291	127,091
Woolen goods, coatings and suitings, yards.....					129,867	196,464

¹ Tons.

MONEY, BANKING, AND CREDIT

BANKING FACILITIES

The following banks, through their Swatow offices, handle foreign exchange and bills: Bank of China, Nederlandsch Indische Handelsbank, and Bank of Taiwan.

The average annual rate of interest paid by the above banks is $5\frac{1}{2}$ per cent on fixed deposits and 2 per cent on current accounts.

LOCAL CURRENCY

The various local currencies, fictitious and actually existent, are the Swatow tael, the local (tek peng or 7-mace) dollar, the "dragon"

dollar, the ".727" dollar, subsidiary silver coins, coppers, and cash. The haikwan or customs tael does not constitute a business currency.

A point of interest in the local currency situation is the Swatow tael and tek peng or 7-mace dollar. The tek peng dollar does not fluctuate, 700 taels always being the equivalent of \$1,000 of this currency.

Although the Swatow tael may be termed a fictitious currency, it is the money of account of the native banks and the larger shops, and serves as the basis of computation of local rates of exchange, which are all quoted in terms of this unit by the native banks. However, it is customary for the foreign banks to quote foreign currencies directly in terms of silver dollars or the ".700" dollar if desired.

The tek peng or ".700" dollar currency is represented only by paper issues of the local banks, and its use is confined to Swatow and Chaohowfu. This dollar is the chief currency of native business, although actual payments may be made in silver dollars at the rate of the day. The custom of the local banks is to make daily note settlements—that is, at the close of business each bank exchanges the notes of other banks for its own. Overdrafts are common, and rates of interest vary from 10 to 30 per cent per annum throughout the year.

The only foreign bank which issues silver-dollar notes is the Bank of Taiwan, but this bank note is not popularly received. It never reaches the interior, and in Swatow it is current only among foreign banks and Government institutions.

CREDITS

In exporting goods to the United States the American importers usually provide letters of credit, and the shippers are instructed to draw either at sight or at so many days (30 to 90), according to the terms of the letter.

In importing from the United States the American exporter invariably demands a letter of credit, which could be procured locally or in Hongkong. The usual amount of deposit required by the banks for such a document is 25 per cent of the amount of the letter, but well-known merchants may procure such documents with a deposit of 10 per cent. Chinese merchants prefer long credits, and often 90 days are stipulated. Importing from Europe is simpler. The local importer only sends an order with a request to draw on him at 30, 60, or 90 days, through a designated (or any) bank, without a letter of credit or authority to draw. Of course, in such cases the European exporter must first be satisfied as to the standing of the local firm, which can be ascertained by referring to the exporter's local bank.

ADVERTISING

Newspaper circulation in this district is very limited, few such publications reaching the farmer class. Newspaper advertisements come to the attention of only the educated, and therefore should be supplemented by some other form of advertising. The handbill is the quickest and surest way to advertise among all classes. Poster advertising (on which there is no tax) is also advantageous. Trade catalogues are of little use, as they appeal only to the educated few.

TRADE ORGANIZATIONS

The British Chamber of Commerce is the only foreign chamber of commerce in Swatow. There is a Chinese Chamber of Commerce and there are about 20 guilds.

TRAVEL FACILITIES AND HOTELS

The best time to visit Swatow is from November to February, when the weather is delightful. The other months are warm. Swatow is most easily and comfortably reached from Hongkong, though there are occasional direct steamers from Shanghai.

The leading hotels of the district are the Astor House and the Oriental Hotel, both in Swatow, the former under Chinese ownership and the latter British.

PROPERTY VALUES, RENTS, AND TAXES

For property in the business section of Swatow the cost per chang (100 square feet) ranges from \$500 to \$1,000 Mex., and in the residential section from \$100 to \$200 Mex. per chang. Office space is limited, and the average rates of rent range from \$35 Mex. per month for two rooms to \$125 for five rooms. Rent for warehouse space averages \$5 Mex. a month or \$50 a year per chang of floor space. Rent for residential purposes averages \$100 to \$150 Mex. per month.

Swatow is the only treaty port in this consular district. There are no foreign concessions in Swatow, the city being under the control of Chinese officials. There is no limitation to the area in which foreigners may reside. Foreigners may acquire property in the usual manner by leasing it in perpetuity.

Foreigners pay no taxes in Swatow. The only public activity of this class of residents is manifested in the formation of committees employed in collecting and expending funds for the construction and maintenance of roads and pathways in the neighborhood of dwellings where foreigners live.

LIVING COSTS

The approximate cost of living per month, which includes board and lodging, club dues, laundry, transportations, and incidentals, is for a single person approximately \$225 Mex., and for a married couple \$325.

The chief recreations are tennis, swimming, and boating. There are no educational facilities for American children, most of whom in this district attend the American school in Shanghai.

TSINAN CONSULAR DISTRICT

By Vice Consul H. L. Milbourne

LOCATION AND AREA

The Tsinan consular district includes all of Shantung Province except the former leased territory of Kiaochow and that portion of the Shantung Peninsula forming the consular district of Chefoo. Roughly, it lies between 35° and 38° north latitude—corresponding to the latitude of North Carolina and southern Virginia—and between 115° and 120° east longitude. The area of Shantung is given as 55,984 square miles, and the 94 “hsien,” or counties, comprising the Tsinan consular district have an area of approximately 46,000 square miles. The area of the Province, therefore, corresponds to that of Iowa, and the area of the consular district is about equivalent to that of Pennsylvania.

Central and southeastern Shantung is mountainous and rugged. The western part is flat and low, and, being cut by numerous streams leading to the Yellow River, is subject to floods. The central part of the northern section is a barren plain, also subject to inundation.

CLIMATE

Shantung shares the general climatic conditions of North China, the winters being long, cold, and dry, the summers short and hot. Temperature ranges from zero to 100° F. The rainy season is in July and August.

The Province is subject to prolonged droughts and at times to sudden and disastrous floods. During the abnormal rainfall in the summer of 1921, following a drought of several years' duration, the Yellow River broke its northern dike near Litsing and flooded 1,800 square miles of land, rendering more than a quarter of a million people homeless.

POPULATION

In 1920 the population of Shantung was 30,803,245 (Chinese Post Office estimate), or 550 to the square mile. Of China's 19 Provinces, Shantung ranks sixth in population and third in density of population. The population of the Tsinan consular district is estimated at 26,000,000. Foreign residents in the district include about 470 Americans, 160 British, 70 Germans, and 2,800 Japanese. Of the American residents, about 90 per cent are missionaries, representing 14 different missionary societies.

CITIES

The most important cities of the district are shown below. There are four American business firms in Tsinan, but none in any of the other cities listed.

Cities	Population (estimated)	Europeans	Americans
Tsinan ¹	283, 000	160	130
Weihhsien.....	97, 000	-----	29
Taianfu.....	90, 000	12	45
Tsining.....	73, 000	6	28
Tehchow.....	55, 000	2	19
Chowtsun.....	42, 500	23	-----

¹ Treaty port where foreigners may reside for trade purposes.

Tsinan, the provincial capital, is advantageously situated at the junction of two railways. Its commercial importance has increased rapidly during the last 10 or 15 years, its growth being stimulated by the construction of the Kiaochow-Tsinan Railway, opened in 1904, connecting the city with the port of Tsingtao, followed by the construction of the Tientsin-Pukow Railway, opened in 1912, affording connections with the two ports which give the railway its name. The earlier growth of Tsinan was due to its favorable central position within a few miles of the Yellow River, to its water communication with the Grand Canal and the Gulf of Chihli, and to the various important agricultural producing centers in its immediate vicinity. Tsinan was voluntarily opened to foreign residence and trade by imperial decree of 1904. The city consists of the old Chinese walled city and the new district outside the walls, usually referred to as "The Settlement." Both the native city and the commercial-port area are under Chinese administration and police control. The American, British, German, and Japanese Governments maintain consular establishments at Tsinan.

Weihhsien, the second largest city in the district, is situated on the Kiaochow-Tsinan Railway about midway between Tsinan and Tsingtao. A motor road connects Weihhsien with Chefoo. Plans for a railway between these two cities have been under consideration for a number of years, but for various reasons they have not progressed beyond the point of discussion. Weihhsien was declared open to foreign trade and residence by imperial decree of 1904, but as a commercial-port area has never been delineated it is not considered as actually so opened. Salt, tobacco, embroidery, lacquer ware, tinware, hair nets, and bristles constitute the bulk of the trade. Weihhsien was the site of the first American mission in Shantung, opened in 1861.

Taian is situated on the Tientsin-Pukow Railway, about 45 miles south of Tsinan. It is the center of an important peanut and fruit-growing district, but Taian is principally noted, however, for its proximity to Taishan, the most famous of the five sacred mountains of China.

Tsining is the terminus of a 20-mile branch line of the Tientsin-Pukow Railway running southwest from Yenchowfu. It is also situated on the Grand Canal. Tsining is an important collecting and

shipping point for cotton, wheat, and cattle. The industries of the city include a flour mill and three egg-products factories.

Tehchow, about 60 miles north of Tsinan, is also situated on both the Tientsin-Pukow Railway and the Grand Canal. It is the site of one of the Chinese Government arsenals and is a shipping point for cotton, bean oil, and other agricultural products.

Chowtsun is on the Kiaochow-Tsinan Railway, about 50 miles east of Tsinan. Its excellent climatic conditions for the growth of mulberry trees make it an important silk-producing center. Chowtsun was also opened by imperial decree of 1904, but, like Weihien, has never been actually opened to foreign trade.

AGRICULTURE AND LIVESTOCK

The population of Shantung, in common with that of China as a whole, is almost entirely dependent upon agriculture for a livelihood. The soil in most parts of the Province is far from poor, and its products are surprisingly varied. Wheat, kaoliang (kafir corn), millet, and beans are the staple crops in the lowland districts east of Tsinan.

Agricultural products (in order of importance)	Planting season	Harvesting season	Average production per acre	Estimated annual production
Wheat.....bushels..	September.....	May.....	16	47, 000, 000
Cotton.....pounds..	May.....	September.....	480	135, 000, 000
Millet.....bushels..	.....do.....	.....do.....	36	34, 000, 000
Kaoliang.....do.....	.....do.....	.....do.....	34	30, 000, 000
Peanuts.....pounds..	.....do.....	.....do.....	1, 600	560, 000, 000
Tobacco.....do.....	.....do.....	.....do.....	1, 200	40, 000, 000
Beans.....bushels..	June.....	October.....	16	10, 000, 000

NOTE.—Weights of the various bushels are as follows: Wheat, 60 pounds; millet, 48 pounds; kaoliang, 48 pounds; beans, 60 pounds.

GRAINS

Nearly one-half of the land in this section is sown in wheat in the autumn. In the spring kaoliang and millet are planted in about equal proportions on the remaining half of the land cultivated. The wheat is harvested toward the latter part of May, and beans are planted in its place. Kaoliang and millet are cut in September and wheat is again sown, while the land from which the bean crop is harvested in October is allowed to lie fallow until the following spring. About one-tenth of the land is reserved for vegetables and other crops.

COTTON

Cotton is grown extensively in western Shantung in the Yellow River and Grand Canal basins. In recent years American cotton has been successfully introduced and cultivated throughout this section. The greater part of Shantung's cotton crop is sent to Tsinan, sold to Japanese buyers, and shipped over the Kiaochow-Tsinan Railway to Tsingtao for export to Japan. The manufacture of wadded garments—a household industry carried on by women—consumes a large share of the annual production. A considerable quantity is also used by the Loo Feng Cotton Spinning & Weaving

Co., which operates a mill with 16,000 spindles at Tsinan, and by the cotton mills at Tsingtao.

PEANUTS

Peanuts are grown wherever sandy soil obtains; the principal producing districts are Taian and Laiwu, in central Shantung. The estimated normal crop of peanuts in the Province is 250,000 tons, more than half of which is for export, either shelled, unshelled, or in the form of oil. Most of the oil is extracted by native methods, although there are two oil mills at Tsinan and others at Tsingtao. Shantung peanuts are larger and contain more oil than those grown in other Provinces of China.

TOBACCO

Tobacco is an important crop in the Ankiu, Weihsien, Changlo, and Changi districts. A low and uncertain grade of tobacco had been grown in Shangtung for many years, but it was not until 1914 that experiments were made with a view to producing a type of tobacco which could be used in the manufacture of high-grade cigarettes. In that year a foreign tobacco company conducted extensive investigations in the Weihsien district and found that both soil and climate were suitable for the growth of Virginia and North Carolina leaf. Large quantities of selected American seed were imported and distributed free of charge to the farmers, who agreed to plant it on the understanding that the foreign company would purchase the entire crop at a fair price. Thus a real tobacco market has been created, and a high-grade tobacco stock has been firmly established. There being no tobacco factories in Shantung, the entire tobacco crop is shipped to the manufacturing centers of Shanghai, Tientsin, and Mukden via Tsingtao.

BEANS

Beans are grown generally throughout the Province. Roughly, 50,000 tons are distributed through Tsinan annually, the greater part of which is shipped to Tsingtao over the Kiaochow-Tsinan Railway. Practically the entire bean crop is consumed within the Province, a part being used in the manufacture of oil by native methods.

OTHER CROPS

Other important crops are maize, grown in the northwestern and southern parts of Shantung; sweet potatoes, grown almost everywhere throughout the Province; and walnuts, grown principally in the Tsingchow and Taian districts. The maize and sweet-potato crops are consumed locally, while the bulk of the walnut crop finds its way to Tientsin and Shanghai. Crops of lesser importance include hemp, rice, buckwheat, ginger, and sesame. Many varieties of fruit are grown, including apples, pears, peaches, persimmons, apricots, plums, cherries, and grapes. Truck gardening is an important occupation throughout the Province. Melons, strawberries, cabbage, garlic, and a wide variety of vegetables are extensively grown.

Mulberry trees and scrub oak are grown in the eastern part of the Province for sericulture purposes.

STOCK RAISING

Cattle are raised everywhere, but the individual herds are small. The number is roughly put at 1,000,000 head, of which from 10,000 to 20,000 are exported and about 100,000 head butchered within the Province each year. Conditions for raising cattle vary greatly in different sections.

Summer pasturage in the mountains is good, but there is not sufficient provender or winter shelter for large herds. In some districts, notably Tsaohsien, Tsaochow, and Tingtao, cattle are plentiful and cheap, and their number could be increased, while in other districts, such as Weihsien, Changlo, and Changi, lack of pasturage confines this industry to the raising of work animals only. During periods of crop failures and high prices cattle are sold indiscriminately.

Sheep, goats, and swine are raised in considerable numbers.

AGRICULTURAL METHODS

While his agricultural implements are of very primitive type, the Shantung farmer possesses a good knowledge of the most important principles of his occupation. The use of fertilizers, the necessity of following a rotation of crops, and the usefulness of leguminous crops in enriching the soil are understood in a general way. Every particle of arable land is under cultivation, while in the mountainous districts the hillsides have been terraced in order to extend the cultivable area.

MINERALS AND MINING

Coal and iron are the most important minerals found in Shantung. The principal coal fields are at Tsaochwang, in the Yih sien district; at Fangtze, on the Kiaochow-Tsinan Railway, about midway between Tsinan and Tsingtao; and at Tzechwan, on a branch line of the Kiaochow-Tsinan Railway which connects with the main line at Changtien, 60 miles east of Tsinan. The Yih sien coal field is considered the best in Shantung. There are a number of small mines in the immediate vicinity of Poshan, south of Tzechwan, which have been worked by native methods for several hundred years. Other coal mines in the district are at Ningyang, on the Tientsin-Pukow Railway, and at Changkiu, north of the Kiaochow-Tsinan Railway between Tsinan and Chowtsun.

Iron ore of high grade is found near Chinglingchen, on the Kiaochow-Tsinan Railway, about 75 miles east of Tsinan.

Resources and production (in tons of 2,240 pounds) of coal and iron are shown in the following table:

Minerals	Nature	Annual production	Extent of resources	Export in 1923
		<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
Coal.....	Bituminous.....	1,800,000	655,000,000	1,245,000
Iron ore.....	Anthracite.....		30,000,000	
	65 per cent iron.....	80,000	100,000,000	15,000

¹ Export from Tsingtao only.

Gold has been discovered at numerous places in the northern part of the Province. The richest deposits are at Chaoyuan, Chiutien (near Pingtu), Chihhusan (near Ninghai), Hsiayutsen, and Kweishan. The mine at Chaoyuan is the only one in actual operation, and is said to be the only one that can be profitably worked. No accurate information is available as to its output.

Copper and lead deposits have been discovered, but no mining operations have ever been undertaken.

MINING

The principal recent development in connection with the mining industry in Shantung was the transfer in 1923 of the coal mines at Fangtze and Tzechwan and the iron mine at Chinglingchen from Japanese to Chinese ownership. In 1898 Germany was given the right to develop the mines along the then proposed railway between Tsinan and Tsingtao. The Japanese took possession of the mines in 1914, and later, by virtue of the treaty of Versailles, the German rights were acquired by Japan. In 1922 a Sino-Japanese agreement was concluded to transfer the mines at Fangtze, Tzechwan, and Chinglingchen to a company to be formed under a special charter of the Chinese Government, in which the amount of Japanese capital should not exceed that of Chinese capital. The Sino-Japanese company, the formation of which was provided for as above, was organized in April, 1923, under the name of the Lu Ta Mining Co., with its head office at Tientsin. The capital of the company is said to consist of 200,000 shares of \$50¹ each, of which the sum of \$2,500,000 is reported to have been subscribed. The Lu Ta Co. formally took possession of the mines in August, 1923, and transferred its head office to Tsingtao.

Mines	Location	Nature of product	Output, 1923	Capital paid up	Nationality of company	Head office
Chung Hsing	Tsaochwang ..	Bituminous ..	<i>Tons</i> 730,000	1 3,500,000	Chinese	Tientsin.
Lu Ta Mines	Fangtze	do.	650,000	2 2,500,000	Sino-Japanese.	Tsingtao.
Poshan Mines	Poshan	do.	250,000	.....	Chinese	Poshan.
Huafeng	Ningyang	do.	30,000	.....	do.	Ningyang.
Tienyuan	Changkiu	do.	30,000	.....	do.	Changkiu.
Chinglingchen	Chinglingchen	Iron .....	.....	.....	(³) .....	.....

¹ Taels.

² Local currency, of which \$1 equals about \$0.50 United States.

³ Operated by the Lu Ta Mining Co.

Chung Hsing mine.—The Chung Hsing Coal Mining Co. was established in 1880 with a capital of \$20,000. In 1898 German capital was admitted, but was bought out in 1908. The capital has now been increased to 3,500,000 taels. The mining area controlled by this company is 122 square miles in extent and has an estimated coal deposit of 200,000,000 tons.² The present output of the mine is about 700,000 tons annually. The company operates eight shafts, all of which are equipped with modern mining machinery of German make. A new shaft, 1,000 feet deep, was sunk in 1922. About

¹ Throughout this chapter, unless otherwise stated, dollars refer to local currency, in which \$1 equals about \$0.50 United States.

² The long ton is used in the material in this chapter having reference to minerals.

5,000 laborers are employed. The company operates a railroad 27 miles long, between Tsaochwang and Taierhchwang, affording connections with the Grand Canal. The Tientsin-Pukow Railway has constructed a branch line from Lincheng to Tsaochwang, a distance of about 20 miles, and has contracted for 60,000 tons of coal annually. Some 60,000 tons are coked annually at the mines. The rest of the output is shipped to Pukow and other points along the Tsien-Pukow line.

Fangtze mines.—The original Fangtze coal mine was worked by the Germans from 1902 to 1914. When the mine was taken over by the Japanese in 1914 new veins were traced near the old mine and operations were started in 1917. The machinery of the original German mine has been dismantled and set up at Tzechwan, only the briquet factory being left intact. The equipment of this mine, as well as of the briquet factory, was of German make. The Fangtze north and central mines are not yet producing, while the south mine has only a nominal output. The equipment of the Fangtze east and west mines, the only two now in operation, is of German and Japanese manufacture. The present output is about 150,000 tons a year. When working at full capacity about 800 laborers are employed. The output of the Fangtze mines is shipped over the Kiaochow-Tsinan Railway to Tsingtao and other distributing points.

Tzechwan mine.—This mine, formerly called Hungshan, covers an area of about 6 square miles and has an estimated deposit of about 70,000,000 tons. There are 12 seams, the first lying at a depth of 100 meters and the last at a depth of 270 meters. The total thickness of the seams is about 6 meters.

Mining operations at the Tzechwan mine were started by the Germans in 1904. There are three shafts—one sunk in 1904, another in 1910, and the third, originally intended for ventilating purposes, in 1913. The mine is equipped with a complete electric light and power plant consisting of two alternating sets of German manufacture and one Parson's turboalternating set. Other equipment includes complete air compression, ventilator, and coal-washing plants, coal separator and conveyors, machine shop and foundry, hoisting engines, boilers, and pumping equipment—all of German make. About 4,000 Chinese miners are employed, working in 8-hour shifts, and receiving about 40 cents a day. The output of the Tzechwan mine is transported over the Kiaochow-Tsinan Railway to Tsingtao and other distributing points along the line. The present annual output is about 500,000 tons.

Poshan coal mines.—This group of mines is now being worked by some 40 Chinese and Japanese firms and individuals, applying both native and foreign methods. The fields cover an area of about 100 square miles. The deposit is estimated at 170,000,000 tons. The total annual output is about 300,000 tons. From 150,000 to 200,000 tons of coke a year are being made at Poshan, about half of which find its outlet over the railway.

Other coal mines.—The coal mines at Ningyang and Changkiu are relatively unimportant.

Chinglingchen iron mine.—The Chinglingchen iron mine covers an area of about 120 square miles and is estimated to contain 100,000,000 tons of ore. The thickness of the vein is 15 to 17 meters.

The quality of the ore varies materially, but the average runs high. An analysis of an average sample, made by a German chemist, showed 65 per cent iron, 23 per cent manganese, 3 per cent phosphorous, and 8 per cent sulphur. The Germans were preparing to work this mine when the European war broke out in 1914, and Japanese operation of the mine dates from 1916. During the Japanese operation of the mine the output varied according to the requirements of the Japanese Government. In 1919 it was 179,000 tons; in 1920, 128,000 tons; in 1921, 88,000 tons; and in 1922, only 26,000 tons. There was no production during 1923. When producing its maximum, about 1,200 coolies are employed in the mine. There is no need at present for hoisting machinery at Chinglingchen.

The ore-filled cars are operated by gravity from the adits, and the empties are hauled back by mules. The only equipment at the mine consists of an old boiler plant and small blacksmith and repair shops.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

With the proximity of fuel and raw materials at Tsinan, considerable industrial development is beginning. Practically all of the industries, of which flour milling takes the lead, are owned and operated by Chinese. Other industrial enterprises include a cotton spinning and weaving mill; a beet-sugar mill and alcohol factory; hair-net, carpet, and egg-products factories; vegetable-oil mills; paper factory, match factories, needle factory, tanneries, fertilizer factory, bone mill, hat factories, cement works, brick and tile factory, and silk filature; the Tientsin-Pukow Railway shops and a number of small machine shops; besides the usual native handicraft industries.

The establishment of flour mills of modern type has been a development of the last few years. There are at present 10 such mills at Tsinan, 1 at Tsining, and 1 at Tungping, all equipped with American milling machinery and all but one owned and operated by Chinese. The capacity of the 12 mills in the district is about thirty-eight thousand 50-pound bags daily.

The plaiting of braid from wheat straw, a cottage industry, has grown to considerable proportions and is a large source of revenue to the population of north central Shantung. The main producing centers are Shaho, Laichow, Pingtu, Chengi, Showkwang, and Yangsin.

The manufacture of hair nets from human hair was begun about 15 years ago and reached vast proportions in 1921. Since then the industry has been on the decline. This is a home industry. Hair-net dealers in the treaty ports supply the hair to the interior villages, where the nets are made by hand, collected, and returned for examination and repair before being packed for export.

The manufacture of bobbin lace by hand is also an important home industry.

Sericulture, although carried on in a crude way, is probably one of the most valuable industries in the Province. In the central and southern part of the Province mulberry trees are grown from slips imported from Kiangsu and Chekiang Provinces. The quality of the mulberry leaves, however, is inferior, and only a small quantity of white silk is produced, the bulk of the product being yellow. In comparison with the chief silk-producing Provinces in China the

output is small. The annual production of raw silk in Shantung is said to be about 400,000 piculs, most of which is hand reeled. The principal producing centers are Tsingtao, Linchu, Changshan, Laiwu, Sintai, Mengyin, and Jihchao.

Although the silk industry in Shantung centers around Chefoo, there are two native filatures at Chowtsun, a Government filature equipped with machinery of modern type at Tsingtao, and a small native filature at Tsinan. The principal market for silk goods is at Chowtsun, followed by Chefoo and Ninghai (in the Chefoo consular district), Weihsien, Tsingtao, and Tsinan. The total annual silk-goods production of the Province is about 530,000 pieces, of which about half is plain silk called "chou" and about a quarter is pongee.

The manufacture of egg products is another industry started within the last 10 or 15 years. There are now 3 egg-product factories at Tsinan, 3 at Tsining, and 1 at Yenchow.

The manufacture of bricks, tiles, and pottery is important in many parts of the Province where suitable clay is available. Poshan, on a branch line of the Kiaochow-Tsinan Railway, has been celebrated for centuries for its glassworks.

LABOR CONDITIONS

Labor is relatively cheap in China. This is particularly true in Shantung with its population of 550 to the square mile. Wages for common male labor average about \$8; female, \$6; and child labor, about \$5 a month. The average for carpenters, blacksmiths, masons, stone workers, painters, and shoemakers' and tailors' apprentices is about \$15 a month. Owing to the surplus of labor in the Province, thousands of farm laborers emigrate annually to Manchuria. For the same reason, labor strikes are unknown in Shantung.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

There are three principal waterways in the district, but they are suited only to junk traffic. The Yellow River crosses the northern part of the Province, from west to northeast, emptying into the Gulf of Chihli. Paralleling the Yellow River to the south is the Siao-tsing Ho, which connects Tsinan with the Gulf of Chihli at Yangkiokow. The Grand Canal is the third of the principal waterways. It enters Shantung at Taierhchwang, on the southern border, and runs northwest, leaving the Province north of Tehchow.

RAILWAYS

The Tientsin-Pukow Railway (head office, Tientsin) connects Tsinan with Tientsin (221 miles north) and with Pukow (408 miles south, opposite Nanking) where connection is had with Shanghai. The Kiaochow-Tsinan Railway (head office, Tsingtao) connects Tsinan with Tsingtao, 245 miles east.

The Tientsin-Pukow Railway operates 260 miles of line in the district, and the Kiaochow-Tsinan Railway operates 245 miles.

Branches of the Tsinan-Pukow Railway in Shantung are as follows: Lokow to Hwangtaichiao, 4.85 miles; Yenchow to Tsining, 20.1 miles; and Lincheng to Tsaochwang, 19.55 miles. Branches of the Kiaochow-Tsinan Railway are as follows: Changtien to Poshan, 24.2 miles; Tzechwan to Tzechwan colliery, 4 miles; and Chinlingchen to Tienshan, 4.3 miles.

Statistics of the two railways show that 454,000 tons of goods were shipped into Tsinan and 446,000 tons shipped out during 1923. The principal items of import were coal, wheat, peanuts, kaoliang, cotton, lumber, millet, coke, kerosene, and sugar. The principal exports were flour, peanuts, cattle, coal, bran, cotton, kaoliang, beans, lumber, and eggs. Of the exports, coal, peanuts, cotton, eggs, and cattle are the only items which enter to a great extent into foreign export trade.

On the Tientsin-Pukow Railway freight rates per ton per English mile are as follows: First class, \$0.0956; second class, \$0.0797; third class, \$0.0611; fourth class, \$0.0398. Passenger fares per English mile are: First class, \$0.06; second class, \$0.04; third class, \$0.02.

On the Kiaochow-Tsinan Railway freight rates per ton per English mile are as follows: First class, \$0.0229 (preferential rates to Tsingtao); second class, \$0.0196; third class, \$0.0164. Passenger fares per English mile are: First class, \$0.0558; second class, \$0.0282; third class, \$0.0156.

There are no railway lines under construction in Shantung at the present time, but there are three projects under consideration: (1) To connect Tsinan, the junction of the Kiaochow-Tsinan and Tientsin-Pukow Railways, with Shunteh (Chihli Province), a point on the Peking-Hankow Railway; (2) to connect Kaomi, a point on the Kiaochow-Tsinan Railway near Tsingtao, with Hsuechow (Kiangsu Province), a point on the Tientsin-Pukow line and the junction of the latter line with the proposed railway from Lanchowfu (Kansu Province), to the sea at Haichow, the new port to be constructed on the coast north of Shanghai; (3) to connect Weihsien, on the Kiaochow-Tsinan Railway, with Chefoo on the coast.

ROADS

The leading roads of the district are listed in the following table. In addition there are 337 miles of roads in the district which are adaptable to motor transportation and 182 miles which were constructed for motor transportation but which are not so used.

Roads	Mileage constructed for motor transportation	Estimated number of motor cars in operation	Passenger rates
			<i>Cents per mile</i>
Weihsien-Chefoo.....	227	35	4
Yucheng-Hsiawa.....	90	4	8
Tsining-Tsaochow.....	77	5	8
Tehchow-Lintsing.....	57	2	8
Tsining-Shanhsien.....		3	8
Yucheng-Tungchang.....	47	10	8
Chowtsun-Tsingcheng.....	37	4	8

In addition to the above there are 337 miles of roads in the district which are adaptable to motor transportation, and 182 miles which were constructed for motor transportation but are not so used.

The Weihsien-Chefoo motor-car service, the most important of its kind in Shantung, was started in September, 1922. Although only a dirt road, the roadbed is kept in very good condition except during the rainy season. The cars leave Weihsien and Chefoo daily, making the run in either direction in 10 to 12 hours. From Weihsien the line runs through Shaho, Laichow, Lungkow, Hwanghsien, Tengchow, and on to Chefoo. The road is leased and operated by a Chinese company. Most of the cars are secondhand machines which have been equipped with special bodies to adapt them to passenger transportation. At present no provision has been made for the transportation of freight over any of the motor-car roads in the district.

In all, there are about 1,100 miles of roads in Shantung either constructed for or adaptable to motor transportation. Early in 1920 a proposal was made to build some 1,600 miles of motor roads connecting all the important cities in the Province; but owing to the state of the provincial treasury nothing was done toward carrying out the project until the autumn of 1920, when the Chinese Government undertook, with funds derived from famine surtaxes on railway fares and freight rates, the construction of the highway from Weihsien to Chefoo. The highway follows the route of the proposed Weihsien-Chefoo Railway and was built in a manner to form the roadbed for such railway. According to the Government's report, \$670,000 was expended in building the road, and 3,700 famine laborers were given employment.

As a famine relief measure the American Red Cross Society, in 1920 and 1921, constructed with famine labor approximately 400 miles of dirt roads in the western and northern sections of the Province, through the heart of the famine area. The Red Cross spent more than \$750,000, United States currency, in the project, employing 26,700 laborers and supporting over 150,000 people during the winter of 1920. The highway stretches from Tehchow, in the north, to Lintsing, Kwantao, Tungchang, and a point on the Yellow River, in the south, and again, from Tungchang through Kaotang to Yucheng; on the Tientsin-Pukow Railway, and from Yucheng through Linyi to Wuting, whence one branch runs south to Tsinghochow, on the Yellow River, and another northeast to Chengtzekow, where the junk traffic between Manchuria and Shantung reaches the northern section of the Province. The highways were turned over to the provincial government in June, 1921.

The construction of these highways has given impetus to the introduction of motor cars, especially for passenger transport, and has led to further interest in roads in other parts of the Province. As a means of protecting the roads, the Red Cross also introduced a type of wide wheeled cart to replace the narrow-wheeled Chinese cart.

SUMMARY OF TRANSPORTATION

The following is a summary of the transportation by the methods in common use in this district:

Mediums	Average load	Average mileage per day	Average cost per ton-mile	Maximum haul
Railways.....	15-30 ton cars.....	250	{ ¹ \$0.06905 ² .01963	<i>Miles</i> 260
Junks.....	28 tons.....	³ 10-50	.025	200
Carts.....	1 ton.....	25	.10	100
Pack animals.....	400 pounds.....	25	.25	50
Wheelbarrows.....	640 pounds.....	20	.17	100

¹ Tientsin-Pukow Railway.

² Kiaochow-Tsinan Railway, preferential rate to Tsingtao.

³ The first figure refers to rate upstream, the second to rate downstream.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

There is but one telegraph company in the consular district—the Chinese Telegraph Administration, which operates 77 stations in the Province. Rates to Shanghai are \$0.18; to New York, \$1.95. The actual distance of the overland routes in the Province totals about 3,500 miles. There are no submarine-cable stations in the consular district. The wireless station at Tsinan, constructed by the Japanese, has not been in operation since it was handed over to the Chinese in 1922.

TELEPHONES

The Tsinan Telephone Co. has recently installed new telephones and the service is now quite satisfactory. Subscribers number 2,652; annual rates are \$84. The automatic type of instrument is in use. Equipment is of German make. No further improvements or extensions are planned for the present.

POSTAL FACILITIES

Postal establishments in Shantung include 1 head office, 2 first-class offices, 116 second-class offices, and 29 third-class offices. During 1923, 382,200 parcels, valued at more than \$14,000,000, were posted. Hair nets represent the major part of the value of the parcels posted at Tsinan. Other articles of export by parcel post, in the order of their importance, are silk, cloth, furs, ironware, and brass ware. In 1923 money orders to the value of more than \$6,000,000 were issued and nearly \$13,000,000 worth cashed. A large part of the value of the money orders cashed represents remittances from Shantung laborers in Manchuria to dependents in Shantung. Arrangements have been entered into for the carriage of mails over several of the motor roads in the district.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The Tsinan Electricity Works was established in 1906. Its equipment then consisted of two semiportable engines with belt-driven alternators, a secondhand German plant formerly used at Tsingtao. In 1910 new machinery was purchased and a new building erected. The plant is now equipped with 2 turboalternators of 500 and 1,000 kilowatts, respectively, 2 high-speed vertical engines coupled direct to 2 Siemens alternators, and 5 Babcock & Wilcox boilers having a

combined heating surface of 12,710 square feet. The number of lamps actually connected is about 40,000. The capital of the company is \$700,000.

The Tsaohsien Electric Light Co. is planning an extension, but it is not at all certain that the plan will be carried through. No other extensions are planned.

The following are the electric-light plants located in the district. All are under Chinese ownership. The power load of the Tsinan plant is 200 kilowatts.

Location	Lighting load	Rates	Location	Lighting load	Rates
	<i>Kilowatts</i>	<i>Cents</i>		<i>Kilowatts</i>	<i>Cents</i>
Tsinan.....	900	$\begin{cases} 1-35 \\ 24-15 \end{cases}$	Chowtsun.....	60	35
Tsining.....	³ 170	35	Fangtze.....	60	(⁹)
Tenghsien.....	³ 113	35	Tungchang.....	37½	(⁹)
Poshan.....	³ 100	35	Taian.....	25-40	(⁹)
Weihhsien.....	60	35	Tsaohsien.....	25	(⁹)

¹ Light.² Power.³ Kilovolt-amperes.⁴ Flat rate.

WATERWORKS AND TRAMWAYS

Projects for both waterworks and tramways at Tsinan have been under discussion for a number of years, but financial and political considerations have delayed their progress. Both projects require considerable capital outlay, which has not been forthcoming. No conservancy or reclamation projects are under consideration in the district at the present time.

EXPORT AND IMPORT TRADE

Tsinan, though open to foreign trade, is an interior city and maintains no customs establishment compiling statistics of trade. The consular district has no seaports. It is not possible, therefore, to give statistics of trade which might be of interest and value in indicating the trade possibilities of the district.

EXPORTS

The Tsinan district is the center of production of numerous Chinese products prominent in the export trade of the country, including peanuts, peanut oil, hair nets, straw braid, egg products, cotton, carpets, hides and skins, wool, silk and silk goods, and walnuts, but these products go out of the district through Tsingtao and Chefoo, the two treaty ports of the Province, and through Shanghai and Tientsin, the principal export centers of North China, with both of which the district has easy means of communication.

With the exception of the export of hair nets and of carpets, there is practically no direct export trade between the district and the United States. The original hair-net district of China is Chefoo, and by far the largest share of the business is still handled at that port, but in recent years Tsinan has become an active competitor. In 1919, only 55,087 gross of nets were shipped direct from Tsinan to the United States; in 1920 the direct shipments totaled 131,660

gross, while in 1921 they reached the high point of 512,317 gross. Since then, owing to the decreased demand in the American market, the direct shipments have been reduced by about half.

The direct shipment of carpets from Tsinan to the United States has shown a steady increase. In 1920 direct shipments totaled only 66 square yards, as compared with 484 square yards in 1921, 3,676 square yards in 1922, and 7,610 square yards in 1923. Many of the carpets exported from Tsingtao are manufactured at Tsinan. Carpets are also shipped from Tsinan to Shanghai for export.

Peanuts are the leading agricultural export staple of the Province, Shantung being the largest producer of peanuts in China. Large quantities of peanuts, shelled and unshelled, and of peanut oil are exported to the United States from Tsingtao.

The following table shows the exports declared at Tsinan for shipment to the United States during the calendar years 1922 and 1923. Values are in United States dollars.

Articles	1922		1923	
	Quantity	Value	Quantity	Value
Soy beans.....pounds.....	4,000	\$106		
Peanuts, shelled.....do.....	10,000	457	24,000	\$1,446
Embroideries.....				84
Human hair.....pounds.....			571	444
Carpets.....square yards.....	3,676	25,678	7,610	54,977
Hair nets.....gross.....	350,881	935,309	306,668	617,725
Works of art.....		68		
Household effects.....		1,146		117
Total value.....		962,764		674,793

IMPORTS

For imports of foreign goods the district depends upon Shanghai, Tientsin, and Tsingtao. The Japanese trade of the district, both import and export, is almost entirely through the port of Tsingtao, but other foreign imports are drawn largely from Shanghai and Tientsin.

Petroleum products—principally kerosene, but including gasoline, lubricating oil, grease, candles, and wax—hold first place among American imports into the district. Industrial machinery and equipment, however, hold the greatest opportunities for future American trade. The possibilities of the district for industrial development are great, but so far progress has been slow. A considerable part of the electric light and power equipment in the district is of American manufacture; all flour-milling machinery is American; some mining machinery and supplies have come from the United States; and the more modern egg-products factories are equipped largely with American machinery. The beet-sugar factory at Tsinan is also partly equipped with machinery of American make.

Any extensive scheme involving the control of the Yellow River, the restoration of the Grand Canal, and the diversion of water for irrigation purposes would offer opportunities for American machinery and equipment. With the development of the mineral resources of the district, mining machinery and equipment should

find a market. Machine tools should also show an increasing demand.

Both the Tientsin-Pukow and Kiaochow-Tsinan Railways have in recent years made purchases of American locomotives and railway equipment. Some possibility of introducing light railway equipment in connection with mining development may also present itself.

Iron and steel products for construction and other work, as well as a great variety of American hardware, find a small but steadily growing market. Cigarettes manufactured in the United States and by foreign firms in China are sold extensively. Recently, a 20 per cent sales tax on cigars and cigarettes has been imposed by the provincial authorities. Electrical supplies and fixtures bid fair to continue a satisfactory item of American imports.

American drugs and pharmaceutical supplies are finding an increased demand, and there is every reason to believe that this business will increase. Soap finds a good market in the district.

American lumber finds a market in the Tsinan district, along with Korean and other timber from the Far East. Paints and oils of American manufacture hold first place among foreign imports of a similar nature, but the low cost of Chinese paints has prevented any extensive sale of American paints to Chinese. For foreign use and for industrial purposes there is a good demand, and it is believed that the market will gradually expand. American roofing materials find a limited but growing market.

Better roads in the district are resulting in the gradual introduction of motor vehicles, principally of American manufacture. There is also a good market for bicycles and for bicycle and ricksha tires.

Among miscellaneous items that may be mentioned are sewing machines, cheaper grades of watches and clocks, optical goods, toilet articles, typewriters and office supplies, and canned goods and provisions.

MONEY, BANKING, AND CREDIT

BANKS

The Yokohama Specie Bank (Ltd.) and the Chinese-American Bank of Commerce (headquarters at Peking), are the only two banks in the district which offer facilities for foreign exchange.

LOCAL CURRENCY

Formerly the standard monetary unit in ordinary business transactions at Tsinan was the "tiao," or small-coin dollar. The silver dollar, however, has gradually replaced the tiao, and prices for staple goods and most other commodities are now quoted in silver dollars. The increasing demand for payment in silver is mainly responsible for the recent depreciation of copper coins. At present \$1 silver exchanges for about 260 coppers. Coppers, however, remain the popular currency among the masses of the people in the Province. With the depreciation of copper currency, there are now large issues of copper notes by many cash shops.

As Shantung requires a large amount of money in the autumn to finance the movement of crops, the local dollar is at a premium at that season of the year. Except for extraordinary market con-

ditions, remittance charges to Shanghai range from three-fourths of 1 per cent to 1 per cent at its height the average rate being from one-fourth to one-half of 1 per cent.

CREDITS

Until recently, because of the lack of facilities for foreign commercial credit and the lack of a large volume of direct trade with foreign countries, practically all of Tsinan's foreign trade was financed through Shanghai, Tientsin, and Tsingtao. Export and import credits were generally opened with banks at these centers. Facilities for financing export and import trade direct with foreign countries, however, are now available through the two banks named above.

In opening a letter of credit it is suggested that the credit be opened with a bank at Tsinan, or that it be made without reference to a particular bank, so that the beneficiary may negotiate it on the spot, thereby avoiding the necessity of transferring funds from other centers and the possible inconveniences incident to exchange.

ADVERTISING AND MERCHANDISING

ADVERTISING

Newspaper advertising in Chinese is employed to some extent, but the principal methods used are posters, street processions, and the distribution of samples. None of the newspapers have a large circulation and none are of such a character as to be important advertising mediums for American products.

A local tax of 20 cents a square foot per annum has been imposed on outdoor posters and billboards, as a result of which most of the foreign firms at Tsinan have discontinued this form of advertising.

MERCHANDISING METHODS

The day is past when American firms can expect to establish themselves at one or two of the principal commercial centers of China and distribute their goods throughout the country on a large scale in competition with foreign products. American firms must establish branches and agencies in the lesser distributing centers. There are at Tsinan to-day offices or responsible agencies of but five of the larger American trading organizations in China. Of these, one is an oil company; two are tobacco companies; one is an importer and exporter of general merchandise, but mainly an importer of industrial machinery and electrical supplies; and one is a sewing-machine company. Owing to the lack of American representation in general lines, native firms carrying American goods usually obtain their supplies as required from their head offices in Shanghai or Tientsin. There are a few Chinese firms at Tsinan which are prepared to establish direct connections with importers and exporters in foreign countries. Chinese buyers generally prefer to purchase their supplies of foreign goods through foreign firms established in the country.

TRADE ORGANIZATIONS

There are two Chinese chambers of commerce at Tsinan, the chamber of commerce of the Settlement and the general chamber of com-

merce of Tsinan, but neither organization offers any special facilities for assisting or promoting American trade with the district.

PROPERTY VALUES AND RENTS

Property values and rents in Tsinan are comparatively high. The purchase price for land in the commercial settlement ranges between \$900 and \$5,000 per mow (one-sixth of an acre), according to location. In the matter of rents, landlords usually figure a return of from 8 to 9 per cent on the investment. Most foreign firms own combined offices and residences and also own their warehouses. No apartments, furnished or unfurnished, are available. Very few houses are for rent and those offered are semiforeign houses, most of which are not suitable for occupancy by a business man of standing.

TAXES AND OTHER ASSESSMENTS

In addition to the retail or lease tax of \$36 and \$24, which is assessed according to the location of the property, there is also a land tax of \$2 per mow per annum. Land in the commercial settlement of Tsinan is held under a 30-year lease, with option for renewal for an additional period of 30 years.

LIVING COSTS

There are no boarding houses in the city and no private families who take in boarders. As already stated, suitable residential quarters are seldom available. Estimated necessary living expenses for a single person range from \$3,000 to \$3,750. For a married couple such expenses would approximate \$6,000, and for a couple with two children, \$7,500.

In making an estimate of the necessary living expenses at Tsinan, the cost of entertaining, cost of summer vacations, club dues, local transportation charges, and the cost of educational and recreational facilities must all be taken into consideration. Few of the foreign residents of Tsinan own motor cars. The usual means of local transportation is by ricksha. Motor cars may be hired for \$3 an hour; the cost of a ricksha with one coolie is \$18 a month. The initiation fee of the Tsinanfu Club is \$50, with monthly subscription of \$10 and additional fees for tennis and golf. There is a foreign school at Tsinan offering instruction along modern American lines for children in the kindergarten and primary grades. The school fees are \$90 and \$120 a year, respectively.

CHANGES IN TRADE CONDITIONS DURING RECENT YEARS

In the matter of industrial development the most striking changes are the establishment of flour mills of modern type, the development and decline of the hair-net industry, and the more recent growth of the carpet industry.

Being advantageously situated in the heart of a great agricultural producing district, at the junction of two railways, and near the Yellow River and the Grand Canal, the importance of Tsinan as a distributing center for a large part of Shangtung is being recognized and the city is undergoing a gradual healthy growth.

TSINGTAO CONSULAR DISTRICT

By Consul Walter A. Adams

LOCATION AND AREA

The Tsingtao consular district comprises the territory of Kiaochow, formerly leased to Germany but now administered by Japan. Its area is approximately 342 square miles, and its latitude is between 35° 54' and 36° 17' N., corresponding to that Nashville, Tenn.

The climate is dry and equable. The average minimum temperature is between 25° and 35° F., and the average maximum temperature between 75° and 85° F. Upon rare occasions the temperature rises to 95° in summer, and falls to zero in winter.

The average annual rainfall is 18.47 inches, the month of August averaging by far the wettest.

POPULATION

The Japanese census of 1922 gives the population of the Tsingtao consular district as 243,781. The population of the city of Tsingtao and its suburbs was estimated at about 117,000. The average density of population throughout the district is calculated at 712.81 per square mile.

CITIES

Tsingtao is the only city of importance in the district. It is unusual in the following respects as compared with other ports of purely Chinese growth:

1. It is only about 25 years old, and consequently has not developed any of the native crafts, such as the production of lacquer or the art of carving, for which many Chinese cities are noted.

2. It has a complete system of modern public works, including sewerage, drainage, abundant roadways, and an efficiently operated set of railway-equipped piers for shipping.

3. There are no foreign "concessions" or "settlements" in Tsingtao. The homes, offices, and factories of Chinese and foreigners alike are scattered throughout the length and breadth of the city.

4. Practically all buildings are of foreign architecture and are equipped with modern plumbing. The city is thoroughly sanitary and is popular as a health and vacation resort. It has a splendid bathing beach situated immediately in front of a modern hotel, open in summer from the 15th of June to the 15th of September. Among the outdoor sports are golfing, swimming, motoring, riding, tennis, picnicking, and hiking. The mountain and sea vistas, unfolded with unwearying variety to the motorist, rider, and hiker, are unsurpassed in the Far East.

The coastal territory commercially tributary to Tsingtao lies as far south as Haichow, in Kiangsu, and as far north as Siatsun, on the Shantung Promontory. The Kiaochow Bay ports, as well as all the territory inland along the Kiaochow-Tsinan Railway, including Tsinan, are naturally tributary to Tsingtao. It is roughly estimated that the population of the territory commercially tributary to Tsingtao is between 10,000,000 and 15,000,000.

AGRICULTURE¹

The agricultural products of the Kiaichow territory are as follows:

Products in order of importance	Planting season	Harvesting season	Average production per acre	Estimated annual production	Disposition
			<i>Piculs</i>	<i>Piculs</i>	
Sweet potatoes...	Apr. 20-30.....	Oct. 20-30.....	91	771,480	Consumed locally.
Peanuts.....	May 1-10.....	do.....	39	413,000	Used as food and oil; surplus exported.
Wheat.....	Sept. 25-Oct. 10.....	June 15-30.....	8	27,722	Consumed locally
Millet.....	Apr. 20-May 5.....	Aug. 25-Sept. 5.....	7	23,651	Do.
Soy beans.....	June 20-30.....	Sept. 20-Oct. 5.....	10	13,923	Do.
Kaoliang.....	Apr. 10-20.....	Aug. 20-30.....	6	2,826	Do.

Agriculture as an industry is relatively unimportant, but the experimental work of the Bureau of Agriculture and Forestry of the Kiaochow administration is extremely important in the future welfare of Shantung. The Kiaochow Bureau of Agriculture and Forestry conducts its experiments in two sections—plant production and animal production—chiefly at Litsun, where it has a well-equipped station occupying about 60 acres of land. Special attention is paid to experiments with a view to improving the varieties of fruits suitable to local conditions and of such industrial plants as cotton, sugar beets, peanuts, tobacco, and hemp. Improvement of native domestic animals by the introduction of foreign breeds (such as Holstein cattle, Berkshire hogs, and merino sheep) and the improving of breeds of poultry constitute a special feature of the bureau's work.

The bureau also publishes and circulates bulletins dealing with more advanced agricultural methods, distributes selected seeds to farmers, and sends experts into the country districts to help them in their difficulties with insect and fungous pests. It encourages the idea of scientific culture by holding agricultural fairs and giving prizes to farmers who grow the best crops. At the fair held in November, 1924, more than 870 farmers of the Kiaochow territory participated, and 102 prizes were awarded by the bureau.

FORESTRY

A stranger in Tsingtao is frequently surprised by the thick green covering of trees over the hills and mountains of the district, against

¹ The writer is indebted to Mr. D. Y. Lin, Chief of the Bureau of Agriculture and Forestry, for the statistics and material in this chapter under the headings "Agriculture" and "Forestry."

the background of bare and deforested China beyond. The work of reforestation was begun by the Germans early in their occupation. They spent 1,526,000 gold marks on forestry work in the Kiaochow territory. They reforested 3,300 acres of land in and around Tsingtao, distributed millions of seedlings for compulsory private planting, created parks and demonstration orchards, set aside permanent forest preserves, and established strict forest preservation laws which are still enforced by a trained organization of foreign police.

The Japanese continued the German reforestation program. At a cost of about \$320,000 Yuan they reforested the Laoshan area and drafted a comprehensive 10-year program for the reforestation of the watersheds along the Hai Pei, Litsun, and Pai Sha Rivers, upon which Tsingtao depends for its water supply.

During the two years of Chinese administration, beginning with December 10, 1922, the German and Japanese forestry enterprises have been maintained and developed. Under Chinese management the Bureau of Agriculture and Forestry has planted the remaining bare areas of the reservations, raised more than 5,300,000 seedlings in the different nurseries, distributed over 250,000 seedlings for private planting, repaired 48,480 square meters of forest roads, created five parks, and planted 7,068 trees along roadsides for shade and aesthetic purposes. One interesting feature of the forestry work of the Kiaochow administration is a rural school established and maintained by the administration in Laoshan for the benefit of the children of the farmers. The farmers send their children to school free of any money charge, but pay for the school work by giving up a specified amount of their time to the protection of the forests. The success of this unique arrangement in forest management indicates that it might be introduced to good advantage in other parts of China.

The area under forest in the Kiaochow territory is 40,000 acres, of which all excepting about 6,220 acres is privately owned. Among the more important trees are pine, robina (commonly known as acacia), oak, white cedar, juniper, zelkova, celtis, ash, poplar, alnus, sterculia, elm, catalpa, sophora, and paulownia.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The most important industrial enterprises in the district are 7 cotton mills (6 Japanese and 1 Chinese); 7 peanut-oil settling plants, all Japanese; 4 match factories, all Japanese; 3 egg-preserving plants (2 Japanese and 1 German); 2 peanut-oil extraction mills, both Japanese; 2 bone-meal factories, both Japanese; 2 flour mills (1 Chinese and 1 Japanese); 2 refrigerating plants, both Japanese; 2 Japanese mineral-water plants; 1 slaughterhouse and 1 electric-light plant, under Sino-Japanese control; 2 straw-braid plants, both German; 1 cigarette factory, British; and 1 each of the following industries: Sawmill, soap factory, tannery, pottery, cement plant, brewery, and silk filature, all Japanese.

The following is a brief summary of data pertaining to some of the main industries of the district, so far as such data can be ascertained:

Industries	Capacity	Approximate number of employees	Approximate capital in industry	Estimated output	Disposition
Cotton spinning.....	20,000 bales per month.	18,650	\$41,500,000	18,200 bales per month.	90 per cent consumed in Shantung households.
Salt production.....	180,000 tons per annum.	8,000	10,000,000	180,000 tons per annum.	Chinese Government monopoly.
Peanut-oil extraction and refining, and peanut grading.	3,500 tons of oil per month; peanut grading, 9,000 tons per month.	3,300	(?)	28,000 tons of peanut oil per annum.	Exported to America, Europe, and Japan.
Silk filature.....	1,100 bales per annum.	1,500	2,500,000	1,000 bales per annum.	Exported to America and France through Japan and Shanghai.
Refrigerating plants.	184,000 cubic feet.	100	2,600,000	Variable.....	Exported to Japan.
Match factories.....	1,650 tons per month.	770	1,500,000	Capacity.....	Consumed in Shantung.
Brewery.....	100,000 cases of beer per annum.	160	500,000	do.....	Consumed in Tientsin, Darien, and Tsingtao.
Slaughtering.....	1,000 animals a day	233	400,000	Variable.....	Consumed in Japan and Tsingtao.
Ssufang railway shops.		1,400			
Egg sorting and packing	800,000 cases per annum.	600		Capacity.....	Exported to Japan.
Manufacturing wooden soles for Japanese shoes	Products valued at \$400,000 Yuan per month.	600		Value ordinarily about \$100,000 Yuan per month.	Do.

¹ Yuan dollars.² \$1,000,000 Yuan in peanut-oil extraction; peanut grading unascertained.

The British Cigarette Co. is now erecting in Tsingtao a modern cigarette factory and printing plant. When complete these enterprises will represent an investment of some \$2,500,000 Yuan and will give employment to about 3,000 persons.

It is estimated that, including investments represented by all the small machine shops and similar establishments, the capital devoted to industrial enterprises in the commercial port of Kiaochow Bay totals well over \$100,000,000 Yuan. Much of this development has occurred since the autumn of 1914. At that time there was not a single spindle in operation. There are now in the commercial port seven cotton mills, with a total of 274,800 spindles, operating 24 hours a day. New cotton mills and extensive additions to the existing mills are being planned.

Other local industrial enterprises are also exhibiting a healthy tendency toward expansion. Tsingtao bids fair to become, within a comparatively short time, one of the greatest manufacturing and industrial centers in China.

Tsingtao depends for its water supply upon a system of wells, which are now supplying their full capacity of 11,000 cubic meters of water daily to the port. At certain seasons of the year there are indications of water shortage, and with the city's rapid industrial expansion the water supply will shortly become inadequate. The sinking of another group of wells, removed from the locations of the present groups, and a careful continuance of the Japanese plans for reforestation are imperative if the port's water requirements during the next 10 or 15 years are to be assured.

Article XXIII of the treaty for the settlement of outstanding questions relative to Shantung contains the following provision:

The Government of the Chinese Republic, on its part, declares that the entire area of the former German leased territory of Kiaochow will be opened to foreign trade, and that foreign nationals will be permitted freely to reside and to carry on commerce, industry, and other lawful pursuits within such area.

Under this provision foreigners are free to construct factories and to reside and carry on their business anywhere within the entire and well-defined area of the former German leased territory of Kiaochow.

A noteworthy fact in connection with Tsingtao's rapid industrial development since 1914 is that most of the factories here are merely branches of much larger manufacturing enterprises with head offices in Japan and elsewhere.

So far as can be ascertained there are no definite organizations among the laborers of the commercial port, and very little difficulty in the way of strikes has thus far been experienced in the industrial life of the port.

There are no restrictions in the matter of employment of child labor. Children are employed to some extent in the textile industry of the port. The minimum age of employees is about 10 or 11 years.

It is practically impossible to obtain any accurate and comprehensive statistics concerning labor turnover in this district. One cotton mill states that in keeping the number of its employees up to 3,500 it must take on from 200 to 250 new employees each month. Another mill states that two years ago the average length of an employee's stay was six months, but that now, because of increased pay for continuous service, the average length of employment is one year. All of the cotton mills complain that during the past three years the wages of textile employees have almost doubled. They attribute the increase from 20 cents to 35 cents per day to competition for labor among the different mills.

MINERALS AND MINING

There are no mines in the Tsingtao consular district, but Tsingtao is the administrative center for the principal coal mines of Shantung. (See chapter on the Tsinan consular district.)

TRANSPORTATION AND COMMUNICATION

WATERWAYS

The only navigable waterway in the Tsingtao consular district is Kiaochow Bay, upon which the harbor of Tsingtao is situated. This will be discussed under the section of this chapter devoted to shipping.

RAILWAYS

The only railway in the Tsingtao consular district is the Kiaochow-Tsinan Railway, extending 256 miles, exclusive of branches, between Tsingtao and Tsinan, where it connects with the Tientsin-Pukow Railway. Only 17 miles of the line lies within the Tsingtao consular district. The head office is in Tsingtao.

The Kiaochow-Tsinan Railway has been under the control of the Chinese Government only since January 1, 1923, and does not use the freight classification promulgated by the Ministry of Communications in Peking for the use of Chinese Government railways. The Kiaochow-Tsinan Railway is considering the adoption of that classification, but it is understood that local customs and traffic conditions offer some obstacle to such a course. The freight classification and rates now in force are as follows:

SMALL SHIPMENTS

Small shipments are transported by "express" at the rate of \$0.01 Yuan per kilometer for each 100 kilos. The rate per kilometer is the same, regardless of the distance which an "express" shipment goes. Small shipments are transported as ordinary freight at so much per 100 kilos, rates varying according to the distance of the haul.

LARGE SHIPMENTS

Commodities are divided into two general classifications—"cheap goods" and "ordinary goods." Under the classification of "cheap goods" fall commodities of relatively large bulk or weight per dollar of value, such as sand, rock ballast, and limestone. Under the classification of "ordinary goods" fall the general commodities of commerce.

Ordinary goods are subdivided into first, second, and third grades, according to quantity. Shipments of 1 to 5 metric tons are "first grade," shipments of 5 to 10 tons "second grade," and shipments of 10 to 15 tons (carload) "third grade." Each of these grades has its own schedule of rates.

An export rebate of 50 per cent of the freight on coal, coke, and wheat bran is paid to shippers upon presentation to the railway of customs export certificates.

GOODS TAX

During the periods of both the German and the Japanese management of the Kiaochow-Tsinan Railway the Chinese authorities made repeated but unsuccessful efforts to establish tax stations along the railway for the purpose of taxing goods moving over it. Until after its transfer to China, goods moving over the railway were tax free. Goods moving over the Tienstin-Pukow Railway between Tsinan and Tientsin and between Tsinan and Pukow were and still are subject to a transit tax. A glance at a railway map of this section of China will indicate that the taxation of goods moving over the Tsinan-Pukow line and the nontaxation of goods moving over the Kiaochow-Tsinan line gave Tsingtao a distinct advantage over Tientsin (other things being equal) as an entrepôt for goods moving to and from Tsinan and the territory tributary thereto. Under the German and Japanese administrations the growth of Tsingtao was also fostered by means of preferential freight rates and special concessions to enterprises calculated to promote trade and industrial development.

The tax-free era for goods moving over the Kiaochow-Tsinan Railway ended on September 21, 1924, when, over the vigorous and

sustained protests of Chinese and foreign merchants, the Shantung authorities imposed a "goods tax" upon shipments moving over the line. The tax divides all commodities into two general classes—lightly taxed goods and heavily taxed goods, and is a surcharge of varying percentages of the railway freight charges. The following are the leading commodities coming under each group and the rate of taxation:

	Per cent of freight charges		Per cent of freight charges
Lightly taxed goods:		Lightly taxed goods—Continued.	
Coal.....	1	Bamboo ware and wooden posts.....	6
Poshan pottery.....	1	Poshan glassware.....	6
Stone and implements.....	1	Cotton cloth, native.....	8
Clay sand.....	1	Timber.....	10
Brick and tiles, native.....	1	Goods not otherwise specified.....	20
Lime.....	1	Heavily taxed goods:	
Red clay and alum.....	1	Livestock.....	40
Grain, inland transportation.....	3	Leaf tobacco (kiln-dried).....	40
Vegetables and melons.....	3	Cotton, raw, for export.....	40
Hardware and ironmongery.....	5	Eggs.....	40
Matting, reed.....	5	Grains, for export.....	40

The goods most heavily taxed are those entering into the export and foreign trade of Tsingtao. Peanuts, peanut oil, and petroleum products are taxed under the classification "goods not otherwise specified."

The tonnage of the principal commodities hauled by the Kiaochow-Tsinan Railway in 1923 was:

	Metric tons		Metric tons
Coal.....	1, 070, 000	Bran (chaff or husks).....	29, 611
Peanuts:		Hardware.....	29, 006
Shelled.....	6, 075	Wheat.....	27, 987
Unshelled.....	60, 663	Lime.....	22, 981
Coke.....	48, 010	Cows.....	16, 512
Wood of all kinds.....	46, 203	Eggs.....	15, 899
Cotton yarn.....	43, 020	Tobacco leaf and cigarettes.....	15, 357
Kaoliang.....	40, 776	Peanut oil.....	15, 300
Petroleum.....	39, 489	Flour.....	14, 281
Cotton, raw.....	39, 381	Sugar.....	13, 534
Beans.....	33, 205	Earthenware or pottery.....	13, 524

ROADS

In the commercial port of Kiaochow there are 189 miles of roads constructed for motor transportation. There are estimated to be 250 motor cars in operation, and the passenger rates are \$4 per hour. The character of surfacing and the average width of commercial port roads are shown in the following table:

Surface	Length	Average width
	<i>Miles</i>	<i>Feet</i>
Macadamized.....	144. 00	33. 66
Stone, square cut.....	1. 34	17. 50
Metaled asphalt.....	16. 33	28. 48
Dirt.....	28. 00	16. 36
Total length.....	189. 67	-----

There are 5.26 miles of concrete sidewalk in the commercial port and 64.25 miles of stone flagging embedded in the roads for the iron-rimmed wheels of Chinese carts and wheelbarrows to run upon so as to prevent undue wear on the ordinary road surfacing.

About 25 miles of the above roadway extend from Tsingtao into the Lao Mountains. The remainder of the mileage is in and immediately about the city. There are two bus lines running on schedule between Tsingtao and Tsangkow, a distance of about 10 miles. The motor-bus fare for the full distance is \$0.50 Yuan.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The Chinese Telegraph Administration operates three stations in the district—one in Tsingtao, one in Ssufang, and one in Tsangkow. The telegraph lines of Tsingtao extend to Tsinan and Chefoo. The only cable connection from Tsingtao is with Sasebo, Japan. The Tsingtao end of the cable is operated by the Ministry of Communications. The Tsingtao wireless station is also operated by the Ministry of Communications. Its call letters are XRT. The wave lengths used are 600 and 800 meters. Its radius by day is 300 to 500 miles and by night about 1,500 miles. This station communicates only with other wireless stations under the control of the Chinese Ministry of Communications and with ships at sea. It accepts commercial messages, at the usual telegraph rates, for points with which it is authorized to communicate. It is not, however, ordinarily used by the public for transmitting land messages except when the telegraph lines can not be used.

The telegraph rate from Tsingtao to New York is fixed quarterly by the Chinese Ministry of Communications.

TELEPHONES

The government of the commercial port of Kiachow Bay operates a telephone system in Tsingtao. There are 2,100 subscribers. Equipment is of Japanese and German make. There are four central offices with switchboards and operatives. These offices are located at Tsingtao, Tsangkow, Ssufang, and Litsun, the three last being suburbs of Tsingtao.

The installation of a telephone costs from \$100 to \$300 Yuan for the drop. In addition there is a special installation fee of \$25 Yuan. For a wall telephone the quarterly fee is \$25 Yuan; for a desk phone the quarterly fee is \$29 to \$31 Yuan.

POSTAL FACILITIES

There are no special features connected with the postal service at Tsingtao. At times mail is received in Tsingtao from New York within 24 or 25 days after its dispatch, but the transit time is usually from 27 to 30 days. Under normal traffic conditions mail between Tsingtao and Peking goes by rail via Tsinan and Tientsin, and mail between Tsingtao and Shanghai (and between Tsingtao and the United States) goes by rail via Tsinan and Pukow. Tsingtao mail to and from the United States is transshipped at Shanghai to and from the trans-Pacific steamers.

SHIPPING AND WAREHOUSING FACILITIES

HARBOR FACILITIES

Vessels of any draft can enter the outer harbor of Tsingtao at all tides in all seasons. The shallowest water through which a vessel floats on its way to the "commercial harbor" through the inner harbor is at "Horseshoe Reef." At the period of the lowest tides of the year the minimum depth of the water at this point is about 37 feet. The outer harbor is separated from the inner harbor by a long neck of land called Tai Hsichen (Yuni San Point), which stretches itself into the bay and forms a breakwater. The piers are inclosed in a basin called the "commercial harbor," formed by the arms comprising No. 1 and No. 4 piers. The depth of the water at the period of lowest tides at the entrance of the basin is 29 feet.

The commercial harbor is reserved for ocean-going and coastwise steamers. Native junks load and discharge their cargoes in the "small harbor" or "junk harbor," in which the depth of the water is approximately 10 feet in certain places. In other places within the small harbor the bottom is exposed at low tide. While one or two very small coasting steamers (little more than large launches) use the junk harbor in discharging native passengers and inward cargo, it is used in the main by junks plying between Tsingtao and the small ports in Kiaochow Bay and along the coast as far south as Haichow and as far north as Siatsun.

There is ample anchorage room in the inner harbor for any reasonable number of vessels. Outside this anchorage ground, however, the bay shoals rapidly and is navigable throughout its inner reaches only by launches of very shallow draft and by junks.

Vessels entering the harbor are required to anchor in the quarantine anchorage area in the outer harbor opposite Tsingtao Island (Arcona) until they have been granted pratique. The employment of pilots by vessels arriving at or departing from Tsingtao is optional.

Organizations of Chinese merchants at Tsangkow, Tafutao, Hung-shihyieh and Shatzekou levy taxes upon junk cargoes for local expenditure as follows: (1) On cargoes loaded on junks for export, a loading tax of 1 per cent of the value of such cargoes; (2) on cargoes imported in junks a weighing tax of four-fifths of 1 per cent of the value of such cargoes.

Inquiries among American firms indicate that the preceding taxes have not thus far been imposed upon American goods.

In the "commercial harbor" of Tsingtao there are four piers with berthing space extending for a length of 10,650 feet.

Pier No. 1 is used principally for coastwise vessels. It is 2,534 feet long, and it can accommodate six vessels at a time. There are four warehouses opposite berths A, B, C, and D. Berths E and EE are for coaling and are generally used only when vessels requiring a large quantity of bunker coal are in port.

Pier No. 2 has a lineal berthing space of 3,666 feet—1,329 feet (berths F, G, H) on the south side, 336 feet (berth M) on the end, and 2,001 feet (berths FF, GG, and HH) on the north side. Berth F is used by the smaller ocean-going vessels drawing about 20 feet. Berth G can accommodate vessels drawing 23 feet, and berth H ves-

sels drawing 27 feet when loaded. Berths FF and GG can accommodate vessels drawing 27 feet, and berth HH, with water a little deeper, can accommodate vessels drawing 29 feet.

Pier No. 3, only 564 feet long, is usually spoken of as the "petroleum mole." It is equipped with two pipe lines (6 inches and 8 inches) for the discharge of oil tankers into the installations of two near-by oil companies. It is also used for the discharge of timber and other cargo not subject to damage if stored in the open, as well as for dangerous goods. There are no warehouses on the pier, but in the immediate neighborhood there are two storehouses (isolated) available for rental to firms desiring to store dangerous goods therein. The water alongside has a comparatively narrow channel and is 29 feet deep. The berth can therefore take a vessel drawing not more than 27 feet.

Pier No. 4 has 3,886 linear feet of berthing space and is used principally for coal, heavy machinery, and salt. There are two berthing spaces, K and L, upon this pier which can accommodate vessels drawing 29 and 28 feet, respectively. At berth K three warehouses are available for rental to firms desiring storage on monthly or yearly terms.

CARGO-HANDLING EQUIPMENT

Pier No. 4 is equipped with a crane with a cargo-lifting capacity of 100 tons, available for rental at \$70 for the first hour and \$30 for each hour thereafter. In addition, there are two floating cranes. The larger one, with a lifting capacity of 30 tons, is available for rental at \$25 for the first hour and \$11 for each hour thereafter. The smaller crane is available for rental at \$14 for the first hour and \$8 for each hour thereafter.

The general import and export cargo of the port is handled almost exclusively by human labor. The supply of coolie labor is adequate and averages with that of the other coast ports of China. The average rate of loading and discharge of steamers is about 30 tons per hatch during each working hour. This includes taking cargo from the ship's hold and storing it in the warehouse on the pier, and vice versa.

The average wharfage charge for cargo of a general nature is \$0.45 Yuan per ton. The rates for stevedorage are about \$0.18 Yuan (base) per ton for day work, with an increase of 80 per cent for night work up to midnight and 150 per cent from midnight to morning. Packages weighing or measuring more than 1 and less than 3 tons are charged for at double the stevedorage base rate. Packages weighing 3 tons or more and less than 5 tons are charged for at three times the base rate. For ordinary cargo the average cost of handling from ship's hold into the warehouse, and vice versa, is 63 cents a ton.

WAREHOUSING

The four warehouses on Pier No. 1 have a total floor area of 105,984 square feet, and are easily accessible from the different berths. All the piers in the commercial harbor are equipped with railway tracks along their entire length, so that import cargo destined to Tsinan or points along the Kiaochow-Tsinan Railway may be loaded on railway trucks directly from the ship's hold with

a single handling. Three large, brick-walled, iron-roofed warehouses on Pier No. 2, with a floor area of 148,932 square feet, are inadequate to house the import and export cargo handled on it.

These warehouses are not available for rent in the ordinary sense of the word. They are the property of the Government and are used exclusively for the landing and shipment of cargo. Import cargo may be left therein for a period of four days without payment of other than ordinary wharfage charges (averaging about \$0.45 Yuan per ton). After the expiration of that period demurrage is charged on cargo left in the warehouses or upon the piers.

The three warehouses on Pier No. 4, at berth K, are in very poor condition and would require a considerable amount of repair to render them suitable for use. It is estimated that they will hold about 2,000 tons of cargo.

In addition to the foregoing, the Harbor and Wharf Administration has 10 warehouses in the wharf area (generally known as the bonded area) with a total storage capacity of about 8,000 tons. They may be rented by firms desiring storage for import and export cargo.

CUSTOMS AND SHIPPING PRACTICE AT TSINGTAO

The establishment of a customhouse at Tsingtao under direction of the Chinese Maritime Customs was provided for in an agreement signed on April 17, 1899, by Heyking, German minister to China, and Sir Robert Hart, inspector general of the Chinese Maritime Customs. The agreement provided that all goods coming into the German leased territory of Kiaochow should be duty free, both from abroad and from China coast ports. The agreement also provided that the full tariff import duty in the case of foreign goods and coast-rate duty in the case of native goods should be paid upon the shipment of such goods from the leased territory to the interior of China. For the collection of such duties barriers were established at the Kiaochow-Tsinan Railway station and the various other exits from the leased territory.

In 1904 a Sino-German commission was appointed by the Chinese and German Governments for the amendment of the existing customs regulations, which had been found to be unsatisfactory. The investigation of the commission resulted in the conclusion that approximately 20 per cent of all coastwise and foreign imports into the German leased territory were consumed locally and the remaining 80 per cent shipped to the interior. An agreement² was arrived at in December, 1905, containing, among others, the following provisions:

1. The establishment of a very small, duty-free area, including the piers and warehouses thereon, together with the ground immediately adjacent thereto.
2. Full payment of import and coastwise duties upon all goods imported from abroad and Chinese territory leaving such free area, excepting certain supplies for the German armed forces and machinery (plant as well as parts of machinery), implements, and tools required for manufacturing, industrial, and agricultural purposes; also all building materials, fittings, and other articles for public and official works. The goods covered by this exception were to be duty free so long as they remained in the German leased territory.
3. Full payment of export and coastwise export duties upon all shipments passing from the German leased territory for export.

² MacMurray: *Treaties and Agreements with and Concerning China*. Vol. I, p. 193.

4. The payment of 20 per cent of all import and coast-rate import revenue to the government of the German leased territory (that being the percentage of the total imports estimated to remain in the leased territory) for administrative expenses.

All of the above provisions excepting the second are still effective. Article XXVII of the Sino-Japanese agreement for the settlement of outstanding questions relative to Shantung provides for the free entry into the Kiaochow territory of machinery (plant as well as parts of machinery), implements, and tools required for manufacturing, industrial, and agricultural purposes; also all building materials, fittings, and other articles for public and official works, if such goods were contracted for in good faith on or before February 4, 1922, and imported within four years from that date.

The continuance of the duty-free area (now known as the bonded area) was provided for in Article XXVI of the above-mentioned agreement. There is no advantage to be gained by leaving import cargo in this bonded area. The demurrage-exempt period is only four days. After this period, which is often inadequate for the clearance and removal of imported goods, the demurrage charges for storage in the bonded area offset the saving on interest charges. A refund of import duty may be obtained upon reexportation of the goods covered thereby. There is, however, an advantage to the public in the matter of goods landed for immediate transshipment. Such goods may be discharged upon the wharves or into the warehouses thereon and reshipped without the payment and refund of import duty, the only formality being the filing of a transshipment application. Cargo for transshipment or importation may be re-packed in the bonded area under customs supervision without the payment of duty.

Under China's treaty provisions with foreign nations a foreign steamship may be cleared through the customs and the consulate concerned when all import duties upon cargoes discharged by such vessel and all export duties upon cargoes laden have been paid, and not before. As a matter of convenience, the Chinese Maritime Customs permit steamship agents at the various ports in China to file a bond or guaranty covering their vessels' liability for the payment of duties, thus enabling the steamers covered thereby to clear promptly. In Tsingtao no such bond or guaranty is required. Inward cargo is discharged upon the wharves, which are under the custody of the wharf office, and the ship has no responsibility for the payment of duty. Outward cargo is laden from the custody of the wharf office, and the vessel in this case also is not responsible for the payment of export duty.

Tsingtao is unlike any other port in China, in that all of its wharves or piers are publicly owned. Berths are granted without discrimination or favor to vessels applying therefor. This, of course, so far as Tsingtao is concerned, eliminates for newly established steamship lines the very difficult problem of terminal facilities.

PUBLIC WORKS AND UTILITIES

ELECTRIC-LIGHT PLANTS

The Tsingtao electric-light plant is under Sino-Japanese management. It carries a lighting load of 1,200 kilowatts and a power

load of 2,000 kilowatts. The rates vary according to the amount of current used per kilowatt hour. Current is sold through the meter except in a few cases where flat monthly rates are charged for current used in electric display signs.

The plant has four steam turbine generators. The two largest are of Swedish manufacture, one is of Japanese make, and the smallest is German. Of the nine boilers in use, seven are of British manufacture and two German. An alternating current, three phase, with a frequency of 50 cycles is produced. The voltage at the power-station generators is 3,300; the voltage at customers' terminals for light is 120. The plant supplies current to the city of Tsingtao and the suburbs of Litsun, Tsangkow, and Ssufang.

WATERWORKS

Tsingtao obtains its water supply from 64 municipally owned and operated wells formed by 6-inch brass, zinc-covered pipes sunk into the ground. Twenty-seven of these wells are located at Paisha and 27 at Litsun. The Litsun station is connected with the Tsingtao reservoirs by two 16-inch mains, and water reaches the city from the reservoirs by gravity. The Tsingtao waterworks have a delivering capacity of 11,000 tons per 24 hours.

In addition to the above wells, there are 17 shallow wells at Litsun, and 13 "emergency" wells at Haipoho (about 1 mile from the reservoirs), of which only 10 are ordinarily used.

Water rates for household and industrial use vary from \$0.09 to \$0.15 Yuan per cubic meter, according to the quantity used per month.

Tsingtao is now consuming the full amount of water which its water system is capable of producing. It is regarded as possible that the city's immediate industrial development may be retarded unless prompt steps are taken to increase its water supply.

EXPORT AND IMPORT TRADE

The treaty of 1898, by which China leased to Germany the Kiaochow Bay territory for 99 years, may be said to have constituted the origin of the port of Tsingtao. Before the German occupation it was a fishing village of no importance. The rapid development of Tsingtao as a maritime port in the brief space of 27 years and under the administration of three nations is apparent from the following figures:

Items	1903	1913	1923
Total exports to foreign countries and to other Chinese ports.....	\$2, 132, 508	\$18, 976, 745	\$34, 761, 431
Imports from foreign countries.....	3, 285, 907	11, 468, 621	34, 552, 117
Imports from other Chinese ports.....	1, 800, 837	7, 964, 548	19, 136, 989
Total exports and imports.....	7, 219, 252	38, 409, 914	88, 450, 537

NOTE.—The above figures and those following refer only to the water trade of the port. They are in United States currency and were converted at the following equivalents for the haikwan tael: 1903, \$0.64; 1913, \$0.7415; 1923, \$0.8231. In addition to the water-borne trade there is a large volume of trade over the Kiaochow-Tsinan Railway.

EXPORTS

The values (in haikwan taels) of the principal articles exported from Tsingtao for the years 1903, 1913, and 1923 are as follows:

Articles	1903	1913	1923
	<i>Taels</i>	<i>Taels</i>	<i>Taels</i>
Beef		767, 145	1, 470, 456
Bran		4, 172	720, 610
Bristles	43, 616	370, 962	344, 807
Clogs, wooden			1, 020, 838
Coal		828, 909	2, 201, 499
Cotton yarn			514, 058
Eggs, fresh		178, 570	3, 003, 271
Oil:			
Bean	384, 484	242, 783	43, 197
Peanut	703, 886	1, 812, 543	4, 973, 142
Peanuts:			
In shell	74 392		1, 031, 222
Kernels		5, 116, 403	9, 038, 900
Salt			288, 251
Silk, raw, yellow	416, 280	1, 680, 770	931, 200
Straw braid	573, 240	4, 184, 714	1, 780, 963
Tobacco		5, 755	2, 777, 396

Most of the increases in the items of export are due merely to the rapid growth of a new port possessing many advantages, natural and acquired. The beef industry has been developed under the German, Japanese, and Chinese administrations. Practically all the exports of beef and eggs go to Japan. The existence and growth of tobacco exports are purely the result of the enterprise of large foreign tobacco companies which established experimental and purchasing stations along the Kiaochow-Tsinan Railway and encouraged the local farmers to plant tobacco. Tobacco now has a great importance in the district around Ershihlipu as a "cash" crop. The falling off in the exports of bean oil is due to the fact that the Shantung farmer has turned from the cultivation of beans to peanuts and tobacco. The drop in the exports of straw braid during the period from 1913 to 1923 is due to the fact that during the dislocation of trade in 1914, when Tsingtao was captured after a siege by Japanese troops, the straw-braid market was moved to Tientsin. Only in the last two or three years has it shown a tendency to return to this port.

The following figures show, by percentages, the destinations of Tsingtao's principal exports during 1923:

Articles	To other Chinese ports	To Great Britain	To Japan	To Hong-kong	To Germany	To France	To United States	To other countries
Beef	2		98					
Bran			100					
Bristles	4	62			9		21	4
Clogs, wooden			100					
Coal	64		33					3
Cotton yarn	87		13					
Eggs, fresh			100					
Oil:								
Bean	87			13				
Peanut	51			20			29	
Peanut kernels	31	1	14		5	13	16	20
Peanuts in shell	1	21	16		4	26	6	26
Salt			100					
Silk, raw, yellow	80		20					
Straw braid	3	2	77	1	8	3	2	4
Tobacco leaf	96		2	2				

A casual examination of the above table shows that Japan not only takes a greater percentage of Tsingtao's exports than any other foreign country, but more even than other parts of China (so far as water traffic is concerned). This great trade was developed during the Japanese occupation of the port of Tsingtao. Prior to the period of the Japanese occupation Japan's interests in and trade with Tsingtao amounted to but little.

Peanuts and peanut oil are the greatest items in Tsingtao's exports to the United States. An interesting feature of this trade is that whereas prior to 1922 American peanut buyers made their purchase contracts at Kobe (Japan) for Shantung peanuts, they are now largely buying direct from Tsingtao. Shipments go direct from this port to the United States, contrary to the former practice of transshipment at Japanese ports.

IMPORTS

Below are given the values (in haikwan taels) of the principal articles imported into Tsingtao through the Chinese Maritime Customs in 1903, 1913, and 1923.

Articles	1903	1913	1923
Cotton goods:	<i>Taels</i>	<i>Taels</i>	<i>Taels</i>
Lastings, plain, colored.....	32,574	66,585	962,492
Prints, plain.....	14,189	332,510	839,441
Sheetings, gray, plain.....	421,446	1,205,542	1,207,980
T cloths.....	40,868	1,265,110	272,611
Yarn.....	3,609,407	7,115,761	4,310,352
Cotton, raw.....			5,649,000
Dyes:			
Aniline.....	57,005	306,173	479,332
Indigo.....	156,055	1,154,314	1,360,569
Electrical materials.....		39,833	226,158
Flour, wheat.....		291,733	775,327
Iron and mild steel:			
New.....	649	55,092	122,143
Old.....	30,203	266,691	331,534
Machinery, textile.....		1,140	2,804,884
Oil, kerosene.....	205,868	1,216,997	2,961,214
Rice.....		81,086	1,083,113
Sugar:			
Brown.....	29,849	655,932	805,896
Refined.....	851	474,379	1,134,554
Timber:			
Hardwood.....		10,094	165,145
Softwood.....		111,374	432,424

The textile industry in Tsingtao had its beginning about six years ago, and the large imports of textile machinery are due to the establishment and extension of spinning mills. The imports of textile machinery in 1922 amounted in value to 5,101,992 haikwan taels. The cotton yarn (valued at 514,058 haikwan taels in the 1923 exports) and the raw cotton (5,649,000 haikwan taels in the 1923 imports) represent only small fractions of local dealings in these commodities. Most of the cotton received in Tsingtao comes in by rail from and through Tsinan and the territory along the Kiaochow-Tsinan Railway. Most of the yarn shipped from Tsingtao goes by rail to and through Tsinan and the territory along the Kiaochow-Tsinan Railway, without being shown in the Chinese Maritime Customs statistics, from which the above figures are taken.

The following figures show, by percentages, the origin of Tsingtao's principal imports by water during 1923:

Articles	From other Chinese ports	From Great Britain	From Japan	From Hong-kong	From Germany	From United States	From other countries
Cotton goods:							
Lastings, plain, colored.....	38		62				
Prints, plain.....	38		61				1
Sheetings, gray, plain.....	14		86				
T cloths.....	22		78				
Yarn.....	3		97				
Cotton, raw.....	2		97				1
Dyes:							
Aniline.....	61	1	1		17		20
Indigo.....	95	5					
Electrical materials.....	24		69		4	3	
Flour, wheat.....			52			48	
Iron and mild steel:							
New.....	44		13	40		3	
Old.....	23		42	35			
Machinery, textile.....	6	9	85				
Oil, kerosene.....	3		5			92	
Rice.....			32	66			2
Sugar:							
Brown.....			1	99			
Refined.....			60	39			1
Timber:							
Hardwood.....			100				
Softwood.....	1		23			76	

NOTE.—There are notable inaccuracies in the above percentages, for the reason that Japan, like Hongkong, acts as a screen, hiding to a considerable extent the true origin of imports and the destination of exports. For example, although Japan produces only a negligible quantity of cotton, that country is accredited as the source of 97 per cent of the water-borne imports of cotton into Tsingtao, amounting in value in 1923 to 5,469,000 hankwan taels. Nearly all the cotton imported by water into Tsingtao is produced in India, the United States, and China, Japan being merely a transshipment point.

MONEY, BANKING, AND CREDITS

BANKS

The only banks in the district doing business in foreign exchange and foreign bills are the Yokohama Specie Bank (Japanese) and the Hongkong and Shanghai Banking Corporation (British), both too well known to require identification. These banks have branches in the United States, in Europe, and throughout the Far East. The Tsingtao branches handle all classes of foreign exchange and credits.

LOCAL CURRENCIES

The three currencies in circulation in Tsingtao are, in order of their importance, the Yuan dollar, Kiaochow tael, and the copper. The Kiaochow tael weighs 574.263 grains and is 987.75 fine. The copper fluctuates in exchange value from about 230 to 255 to the Yuan dollar.

Comparatively few silver Yuan dollars are in circulation in Tsingtao. The principal currency of the port is the paper bank note based upon the Yuan dollar. Prices for practically all commodities of commerce, excepting bristles and straw braid, are expressed in Yuan dollars. Prices for bristles and straw braid are quoted in Kiaochow taels, which are usually at a premium of about 6 per cent as compared with Shanghai taels. Copper coins are used for fractions of less than 10 cents. These coins are current in the Chi-

nese hand-to-hand trade of the port and to a certain extent in the payment of labor, but they do not occupy an important position in local trade.

Native bank orders, written and "chopped" entirely in the Chinese language, play an important part in the trade of the port and in the up-country trade. The making of large remittances is accomplished through the exchange at Tsingtao of native bank orders on banks in different Chinese cities, the exchange rate on any given day being settled by the demand upon that particular day. The daily exchange rate between the Kiaochow tael and the Shanghai tael and also the Yuan dollar is fixed in this manner.

The cost of the remittance of funds from Tsingtao to Shanghai through the usual banking facilities is normally from a quarter to a half of 1 per cent.

At times fluctuation in exchange has a very disturbing effect upon Tsingtao's foreign trade. Because of their failure to fix exchange by forward banking arrangements at the time of contract, local firms are at times involved in heavy losses in the matter of import and export shipments during exchange fluctuations. Tsingtao's export trade to America, chiefly peanuts, is particularly sensitive to exchange fluctuations. Peanuts from Tsingtao, after surmounting the American customs barrier of 3 and 4 gold cents per pound, compete with American-grown nuts on a margin so small that at times only slight exchange fluctuations affect the trade seriously.

CREDITS

Speaking generally, it may be said that the export trade from Tsingtao to the United States is on a 60-day basis for shipments to the Pacific coast and on a 90-day basis for shipments to the Atlantic coast. In the same manner it may be said, subject to frequent exceptions, that the import trade from the United States is on a 90-day basis. There is, however, a considerable amount of business with the United States, both import and export, transacted upon surrender of bills of lading and other documents against payment. In Tsingtao the question of credits is an important phase of foreign trade—one that merits careful study by representatives of firms transacting or contemplating business in this territory.

In establishing a credit to cover an importation from the United States a firm in Tsingtao presents to its bank a written, signed request somewhat similar to the following:

Please instruct your ----- branch by wire/letter to negotiate the draft of ----- on me/us for full or ----- per cent of the invoice cost of -----.

Drafts to be drawn at ----- days/months sight and accompanied by all shipping documents.

Marine insurance and war risks to be effected in -----.

This request is to remain in force for ----- calendar months.

I/We hereby guarantee to accept all drafts drawn under the above credit on presentation and pay the same at or before maturity. All exchange in connection with the transaction is to be settled through you.

In some instances the bank may establish the desired credit upon this written request without further ado, but more often it will require the applicant to deposit a percentage of the desired credit as a guaranty, protecting itself as regards the balance by holding,

upon their arrival, the bill of lading and other shipping documents against payment.

There are no public storage warehouses in Tsingtao. An American firm in shipping goods to Tsingtao covered by a bill of lading attached to a 60 or 90 day sight draft, with flat instructions to the bank not to surrender bill of lading until the draft is paid, may place both the bank and its customer in an awkward predicament. Unless the shipment is cleared promptly through the customs and removed from the public warehouses upon the piers, demurrage charges soon become disastrous. Frequently the purchasing firm desires, or perhaps finds it necessary, to avail itself of the full 60 or 90 days stipulated in the draft. While the matter is one to be decided by each firm upon its own responsibility, the interests of the American firm would probably be adequately protected if the local bank were given some discretion in the matter of the surrender of shipping documents. Frequently the local banks, knowing with some intimacy the financial position and standing of Tsingtao firms with whom they are dealing, are able to release shipping documents, without the immediate payment of the covering draft, upon the execution by the purchasing firm of a "trust receipt" containing some such stipulations as the following:

1. That the goods in question (not delivered to purchasers) will be stored by the purchasing firm only as trustee on behalf of the bank, as a guaranty of payment of the accepted draft upon its maturity, and that the proceeds of the sale of all or any part of such goods will be handled, pending payment of the draft, only as trust funds belonging to the bank.

2. That the goods or, in the event of prior disposal, value thereof will, pending payment of the draft, be surrendered to the bank upon demand.

3. That, pending payment of the draft, the goods will be fully insured in favor of the bank against all risks.

The export of merchandise from Tsingtao to the United States is accomplished under approximately the same credit and banking arrangements as imports.

POWERS OF ATTORNEY

Too much emphasis can not be placed upon the necessity of the proper wording of the powers of attorney which representatives of American firms should have in order to conduct expeditiously the business of their principals. Powers which do not answer the requirements of local banks are frequently the cause of embarrassment and loss of time to representatives of American firms. Where a general power is intended, it is not sufficient to have it couched merely in general terms. It should, in addition to a conventional blanket expression of general power, include the following specific powers:

- (1) To open and/or operate current accounts in the name of the principal;
- (2) to overdraw that account;
- (3) to borrow money in the name of the principal;
- (4) to pledge goods and/or securities;
- (5) to draw, accept, and indorse bills of exchange and related documents;
- (6) to make forward exchange settlements;
- (7) to substitute,

ADVERTISING

The local newspapers afford the most effective single means of advertising in Tsingtao. Of the four largest newspapers, two are published in the Japanese language, one in Chinese, and one in English. Their names, estimated circulation, and published advertising rates may be obtained upon application to the consulate.

For articles such as toilet preparations, patent medicines, wearing apparel, foodstuffs, office and household furniture and supplies, cigarettes and tobacco, and novelties, possibly the newspapers, supplemented by window and signboard posters, would be the most effective means of advertising. Pictures of a striking nature are essential to any comprehensive advertising campaign designed to reach the majority of the population.

Another reasonably effective means of advertising is the use of slides in motion-picture theaters, of which there are four in Tsingtao. The rates charged by the theaters for slide advertising vary according to the number of performances at which the slide is to be exhibited, but, on the whole, are considered reasonable. At one, where new pictures are shown every second day, the monthly rate for one slide is \$15 Yuan.

There are no regular advertising agencies in Tsingtao. Through their native dealers or agents, foreign firms arrange for roadside, wall, and street advertising. Roadside, street, or wall advertisements larger than 8 feet square and roof advertisements larger than 10 feet square are prohibited by municipal regulation. The following municipal tax is levied:

	Per square foot per month
Roadside advertisements	\$0.04
Wall advertisements .....	.02
Roof advertisements .....	.02
Roof advertisements (with shelf and electrical wiring) .....	.05

A reduction of 20 per cent is given in the rate of taxation for advertisements exhibited for longer periods than three months, and a reduction of 40 per cent for periods longer than six months.

TRADE ORGANIZATIONS

The leading trade organizations in Tsingtao are the American Chamber of Commerce, British Chamber of Commerce, Chinese Chamber of Commerce, German Chamber of Commerce, and Japanese Chamber of Commerce. The American and British organizations do not maintain offices. The addresses of their honorary secretaries change when new secretaries are elected. It is suggested that letters intended for these organizations be addressed in care of the American and British consulates, respectively.

The American, British, and German chambers of commerce are small, informal organizations which ordinarily become active only when questions affecting their respective community or business interests arise. The Chinese and Japanese chambers have paid secretarial staffs and are quite active in fostering their respective interests. The Japanese chamber especially is active in the compilation of useful statistics, arbitrating disputes in which its members are involved, and making investigations of an economic nature. It also maintains a laboratory equipped to make commercial analyses.

HOTELS

The two main hotels at Tsingtao are operated by Europeans under Japanese control. These hotels afford ample accommodations upon the American plan. Commercial travelers are given a discount of 10 per cent from the regular rates.

There are a number of first-class boarding houses in Tsingtao, the rates being somewhat higher in summer than winter, as Tsingtao is a popular summer resort. Board and room for an adult, however, should not cost more than \$150 Yuan per month throughout most of the year.

PROPERTY VALUES AND RENTS

In order to convey an understanding of the present status of real property in Tsingtao it is necessary to refer briefly to the beginning of the port. Shortly after the German Government became established in the leased territory of Kiaochow Bay it acquired by purchase from the Chinese owners more than 12,000 acres of land to be used as the site for the city of Tsingtao. Of this the German Government sold outright to private individuals only about 310 acres, holding the remainder in reserve or leasing it to persons or firms for the erection of residential or business properties.

When a Japanese military government occupied Tsingtao in 1914 it took possession of the German public lands, and later, in 1917 and 1918, acquired by purchase from the Chinese owners some 2,700 acres of additional land. A great deal of this land was thrown open to the public for building purposes under 10-year leases. When the Kiaochow territory was restored to China on December 10, 1922, the Sino-Japanese agreement pertaining thereto provided for the extension of all valid leases for a period of 30 years upon the then existing terms and, at the expiration of that time, for a renewal for a further period of 30 years upon terms to be fixed at the time of renewal. In the negotiations concerning the titles to the 310 acres sold outright by the German Government the Chinese delegates maintained that since the German Government held the Kiaochow territory under only a 99-year lease it could not convey title to lands situated therein for a longer period than 99 years. The Japanese delegates held that the German Government, having divested the original Chinese owners of all rights in the land, was in a position to convey title in perpetuity. No understanding was reached, and the matter was left open for future settlement. That settlement has not yet been accomplished. It is not the policy of the Chinese Government to grant leases in perpetuity covering lands in the Kiaochow territory. All new leases issued by it are for periods of 30 years or for shorter periods.

There have been few transfers of privately owned land since the restoration, and it is impossible at present (with the question of the titles thereto still pending) to give any fair idea of the value of such property. Most of the desirable public land sites open to lease have been taken up. No initial payment is made to the Government in obtaining original leases, but the demand for leases is such in the transfer of leased land (which can be accomplished only

by the sale of buildings thereon) between private individuals that land is rapidly acquiring a sales value. Leased land in the city of Tsingtao is divided into five classes, the annual rental charged by the Government being as follows (per fang-pu, a unit equivalent to 25 square feet) :

	Yuan
First class-----	\$0.62
Second class-----	.542
Third class-----	.465
Fourth class-----	.387
Fifth class-----	.310

The first and second classes are in the principal business sections of the city and the third, fourth, and fifth are in the residential sections.

While no hard and fast statement can be made concerning the price at which office space may be rented in Tsingtao, it may be stated that office rooms with about 14 by 16 feet of floor space are at the present time being rented for about \$50 Yuan per month, including light and heat.

Warehouse space in the bonded area (adjacent to the wharves) may be rented for \$0.60 Yuan per fang-pu (25 square feet) per month under rent agreements which usually cover a period of six months. The buildings in this area are made of corrugated iron and are owned by the Harbor Administration. The charge for warehouse space rented from private owners would perhaps be about 25 to 50 per cent higher.

Houses containing from 8 to 10 rooms may be rented for residential purposes at prices ranging from about \$150 to \$400 Yuan per month, depending upon their location and the size of the plot of ground upon which they stand. In outlying sections of the city, 2 to 3 miles from the business section, houses containing about seven rooms may at times be rented for approximately \$100 Yuan per month.

TAXES AND OTHER ASSESSMENTS

Taxation in Tsingtao is comparatively light. Owned land is taxed at the rate of 6 per cent upon a taxation value arrived at in 1912, when owned land was divided into 11 classifications ranging in value from \$2.40 Yuan per square meter in the main business section down to \$1 in more or less undeveloped sections. Improvements upon land in Tsingtao are not taxed.

LIVING COSTS

Only occasionally are furnished rooms available without board. Where such rooms are available the question of rent is one for negotiation. The estimated necessary monthly living expenses (in Yuan dollars) are approximately as follows: For a single man, \$300; single woman, \$270; married couple, \$500; married couple with two children, (living in two rooms), \$700.

The estimate of necessary living expenses includes a small amount for recreation, such as moderate club expense, motion pictures, and similar expenditures, but does not include the expense of entertaining. It may be stated, however, that anyone desiring to participate

in community social activities would find it necessary to do some entertaining.

There is at present an efficiently managed school in Tsingtao open to American and European children. Students, upon graduation from the high school, may pass directly into American colleges and universities

CHANGES IN TRADE CONDITIONS IN PAST DECADE

In 1913 Tsingtao was known principally as a summer resort. Trade was insignificant, but healthy and growing. There were, practically speaking, no industries. Connected with Tsinan—256 miles distant on the Tientsin-Pukow Railway—by the Shantung Railway (which owned and operated the principal coal and iron mines along its route), and equipped through German enterprise with a splendid harbor, Tsingtao was the open door to Shantung's 30,000,000 people and its vast agricultural and mineral wealth. At that time Japanese interests in the port and in its trade were almost nonexistent.

In the autumn of 1914 Tsingtao came into world-wide prominence. That time marked the inauguration of a notable change in Tsingtao's foreign trade affiliations. A Japanese civilian population flocked to the port and soon became firmly established in trade and industry. Japanese steamship lines began to ply between Japanese ports and Tsingtao, which shortly became an important source of raw materials and food supply. Shantung's coal and iron ore went to Japan, and a large export trade developed in eggs, beef, salt, and peanuts. Kobe became the market in which the peanut buyers of Europe and America made their contracts for Shantung peanuts and peanut oil. Freight rates guided Tsingtao's exports to and through Japanese ports for transshipment.

After Tsingtao's restoration to China in December, 1922, there began a new phase in its history. Tsingtao became an important center of direct trade between China and foreign countries, and the port now ranks third among the world's peanut export markets. American and European peanut buyers who formerly visited and placed their contracts in Kobe now transact their business in Tsingtao. The city has manufacturing and industrial enterprises representing investments totaling over \$100,000,000 Yuan. It has climbed to fifth place in importance amongst China's foreign-trade ports, and is connected with Europe and America by 18 direct transoceanic steamship lines.

YUNNAN CONSULAR DISTRICT

By Consul M. S. Myers

LOCATION AND AREA

The Yunnan consular district comprises the whole of the Province of Yunnan, which may be called the southwestern corner of China. It is bounded on the north by Szechwan, on the east by the Provinces of Kweichow and Kwangsi, on the south by Indo-China and Burma, and on the west it is bordered by Burma and Tibet.

Roughly, Yunnan Province lies between 22° and 28° north latitude, corresponding with the northern half of Mexico. It has an area of 146,718 square miles, or slightly larger than that of Montana. Yunnan Province is mountainous throughout, having high table-lands in the east, and high, narrow mountain ranges in the west, separated by deep river valleys.

In general the climate is excellent, especially on the table-lands. It ranges greatly, however—from subtropical heat in the low-lying valleys to perpetual snow on the high mountains. At Yunnanfu, 6,200 feet above sea level, the average minimum temperature in winter is 39° F., and the average maximum in summer, 79° F. Autumn and winter constitute the dry season: spring and summer make up the rainy season, with an average rainfall of about 40 inches.

POPULATION

According to estimates of the Chinese Post Office, the population is 9,839,000; other estimates place it at about 12,000,000. The population of Yunnan is the most heterogeneous in China. The Chinese, immigrants from other Provinces, are the most numerous, but there are many singular tribes of mixed Mongol stock, the most important and interesting of which are the Lolos and the Shans. The Chinese speak a Mandarin dialect, but the tribes have their own languages.

CITIES

In the following table are shown the leading cities of the district:

City	Population (estimated)	Europeans (approximate)	Americans	American business firms
Yunnanfu.....	120,000	150	10	1
Kochiu.....	75,000	-----	3	-----
Talifu.....	26,000	8	1	-----
Chaotung.....	30,000	10	-----	-----

Yunnanfu, situated at the railhead of the Haifong-Yunnanfu Railway, 534 miles from the seacoast at Haifong, Indo-China, is the capital, largest city, and chief commercial center of the Province.

It was designated as a treaty port, but has never been actually opened, though foreign firms have located there and are engaged in import and export trade.

Kochiu, about 25 miles west of Mengtz, is the seat of the tin industry.

Talifu, about 220 miles west of Yunnanfu, is the principal city of western Yunnan. It is a collecting point for skins and hides and some furs and a distributing point for cotton yarns. Near by are the quarries of the much-prized Tali marble.

Chaotung, 227 miles north of Yunnanfu and 170 miles south of Suifu, in Szechwan, is the chief city in northeastern Yunnan. Formerly it was the center of an important caravan traffic with Szechwan, but since 1910 much of this traffic has been carried by the Yunnan Railway, completed in that year.

There are no foreign concessions in Yunnan Province.

AGRICULTURE

In the following table is shown the average production of the four principal products in the order of their importance:

Product	Planting season	Harvesting season	Average production per acre	Estimated annual production	Use or disposition of crop
Rice.....	Spring.....	Autumn.....	<i>Bushels</i> 1 20	<i>Short tons</i> 1,000,000	Food.
Beans (broad).....	Autumn.....	Spring.....	1 13 to 14	2 400,000	Food and feed for animals.
Corn.....	Spring.....	Autumn.....	3 14	133,333	Do
Wheat.....	Autumn.....	Spring.....	1 13 to 14	106,666	Food.

¹ Bushels of 60 pounds each.

² Includes all varieties.

³ Bushels of 56 pounds each.

Rice, the most important crop and staple foodstuff of the population, is grown in the lower valleys throughout the Province and to some extent in the hills. The entire product is used locally, some rice being imported when the crop is poor.

Beans of many kinds are raised, though the broad bean is the principal variety. Yellow beans and small kidney beans, cultivated in the summer, are the only beans exported. The bean exports are inconsiderable and go entirely to Tonkin.

Wheat and *maize* are widely grown. Buckwheat and millet are important hill crops. *Barley*, from which the Tibetans make "tsamba," is cultivated in the high altitudes of the northwest. The cultivation of opium has been widespread during the past few years, having become again one of the principal winter crops.

Agriculture is the chief occupation of the people, and two crops a year are usually grown. Land holdings are very small, and the implements of cultivation are most primitive.

MINERALS AND MINING

Tin.—The tin belt under development is confined to the vicinity of Kochiu, about 25 miles west of the treaty port of Mengtzu. It extends about 20 miles north and south and between 3 and 4 miles

east and west. The deposits are mostly residual in ferruginous clay, contained in water-worn cavities in the limestone. Except as stated below, only native mining and treating methods are used in this industry.

The principal factors retarding the development of the industry are the dependence upon rains for providing an adequate supply of water for concentrating purposes, on account of which this phase of the industry can not be carried on during four or five months each year; native methods of treating the ore; and the high cost of transporting concentrates by pack animals to the smelters at Kochiu.

The Kochiu Tin Trading Co., largely owned by the provincial government, is the leading tin-mining concern. Its original capital was \$2,000,000 (Yunnan currency), and its principal mine is Malaga (Ma La Ko), located in the mountains between Mengtsz and Kochiu. The output in 1923 was about 900 tons of tin. The plant has modern equipment, of German make, with a capacity of about 400 tons per day, and an aerial tramway. The mine has never been operated at full capacity.

Practically the whole tin output of the district is exported in slabs to Hongkong, where it is refined before shipment to western countries. The number of laborers engaged in the tin-mining industry varies. During part of 1923 laborers employed were estimated at 20,000, but the force increased to 50,000 in the early part of 1924.

During 1923 the price of tin in slabs at Kochiu ranged from \$1,079 to \$1,682 Yunnan (\$415 to \$648 United States currency) for 1,000 catties (1,400 pounds in this trade), or about 37 cents (United States currency) per pound.

Coal is widely distributed, but little is known of its extent and quality. The most important present production areas are the Kopaotsun field and the Hsiaolungtan field, both lying close to the Yunnan Railway. The former has produced as much as 20,000 tons of bituminous coal a year, but is now producing little. The output of the latter field is described as a hardened lignite, and its increasing output is now reported to be in the neighborhood of 20,000 tons annually.

Copper.—The principal copper-producing districts are Chiaochia, Tungchwan, Yimen, and Lungling, in the northeastern part of the Province. Yungchang and several other districts in western Yunnan also contain valuable deposits. According to Government returns, production has decreased about 50 per cent as compared with that of 1914 and 1915 and is only about one-twentieth of that of the reigns of Chien Lung and Chia Ching, of the Ching dynasty (1736–1821 A. D.). The heavy cost of transportation by pack animals is the chief factor militating against the development of this industry. Disturbed conditions have also adversely affected the output.

The average price of copper at Tungchwan, the main copper-producing district, during 1923 was about \$289 (United States currency) per short ton.

Zinc.—Zinc mining in this Province is an old industry, having existed, it is claimed, before the Yuan dynasty (1280 to 1368 A. D.). Zinc deposits are numerous, according to official reports, the principal ones being found in the northeastern and eastern parts of the

Province—the districts of Tungchwan, Yiliang, Chiaochia, Lutien, Loping, and Lunan. Production has decreased since 1915, when it was over 2,000 tons annually, the highest point since the revolution of 1911. This industry has been affected by the same conditions that have affected the copper industry.

The average price of zinc at Tungchwan during 1923 was about \$58 (United States) per ton.

Yunnan Province undoubtedly contains varied and important mineral deposits. In addition to the ones mentioned above, there are silver, gold, iron, lead, quicksilver, antimony, bismuth, mica, asbestos, soda, cobalt, and salt. As far as is known the tin deposits are the most important but owing to the lack of reliable data on the subject the relative importance of these mineral deposits can not be given. Mining operations are carried on by Chinese companies or individuals who use primitive native methods entirely. The operations are generally conducted on a very small scale, but it is believed that the extraction of the ore could not be done more economically by modern methods than it is at present.

MANUFACTURING AND INDUSTRIAL DEVELOPMENT

The manufacturing industries of Yunnan are of the primitive household type. The weaving of cotton cloth on native hand looms is the principal one, though leather, grass paper, bamboo baskets, canebrake mats, copperware, and some other articles are manufactured. The few small plants which use modern machinery are located at Yunnanfu, and include machine shops, factories for making socks, metal works, and a sugar factory. Hand machines are used in some places for knitting socks.

LABOR CONDITIONS

The wages of ordinary carpenters and masons average 27 cents (United States currency) per day of 8 hours, without food. The masons are well regarded for craftsmanship, but the carpentry work is rough.

The local hosiery factory, using electrically-driven machines, pays female labor 8 cents silver per dozen socks. The earnings on day shift of 8½ hours, for an output of 11 to 12 dozen, averages 34 to 37 cents gold, without food; night shift of 8 hours, including mealtime, pays 12 cents silver per dozen, or about 32 cents gold for the average output of 7 dozen. A meal is furnished to employees at midnight. It may be of interest to note that day workers are now required by the local authorities to attend school, which is held at the factory, between 4.30 and 5.30 p. m.

TRANSPORTATION AND COMMUNICATION

WATERWAYS

Yunnan has no navigable waters of commercial importance. Two flat-bottom stern-wheel steamers comprise the only powered commercial craft. They ply on Kunyang Lake between Yunnanfu and Kunyang, about 40 miles.

RAILWAYS

The Yunnan section of the Haifong-Yunnanfu Railway (*Compagnie Francaise des Chemins de Fer de l'Indochine et du Yunnan*, mileage 534, head office Paris) runs between Hokow and Yunnanfu, 289 miles, and is commonly known as the Yunnan Railway.

For purposes of computing the passenger and freight rates, the line is divided into four zones, the rates in Tonkin being payable in piasters and those in Yunnan in Yunnan dollars.

As this railway provides the only practicable communication with the sea, its importance is obvious. The whole foreign trade passing through the port of Mengtsz—that is, of a large part of the Province—which amounted to \$18,216,074 and \$19,189,555 in 1922 and 1923, respectively, is hauled over this line.

The Kopi Railway (Chinese)—Kopi Railway Co.—45 miles long, is the only other railway in the Province. It is 60-centimeter gauge and connects Kochiu, the tin center, with Pishihchai on the Haifong-Yunnanfu line. Its head office is at Kochiu. Tin in slabs constitutes the chief article of trade carried over it, the rate per short ton per mile being about 4 cents (United States currency).

A 60-centimeter-gauge line connecting Kopaotsun, a station on the Haifong-Yunnanfu Railway, with Erhlungshichu, in the center of the Kopaotsun coal field, is being surveyed and will be built by the *Compagnie Francaise des Chemins de Fer de l'Indochine et du Yunnan* under contract for the Ta Lu Coal Transportation Co. (Chinese). The line will be about 17 miles long and should be completed in three years.

ROADS

There are no roads for motor transportation in Yunnan Province. The main highways are very narrow—about 3½ feet in width—and are mostly, or were once, paved with flags and cobblestones. Transportation is principally by means of pack animals or by coolie carriers.

The construction of a motor road connecting Yunnanfu and Shetze, a distance of about 65 miles, has recently been started. This new road will form a link in the Yunnanfu-Talifu road, which is about 220 miles long.

TELEGRAPHS, CABLES, AND WIRELESS SERVICE

The Chinese Telegraph Administration has 42 stations throughout Yunnan connecting with the rest of the Republic and with Hongkong, Indo-China, and Burma. In recent years disturbances in other parts of China have made it necessary to route telegrams via Saigon, and thence by cable to Hongkong. The cost of a telegram to Shanghai by this route is about 63 cents (United States currency) per word.

Yunnanfu has two wireless installations, one of 5 kilowatts, for the private use of the railway company to which it belongs, and the other of 50 kilowatts, belonging to the Yunnan government. The latter, though completed, is not in use.

TELEPHONES

There is local telephone service in Yunnanfu, Kochiu, Mengtsz, and Talifu. There is no immediate prospect of extending any of these lines. The service in Yunnanfu is fairly satisfactory.

POSTAL FACILITIES

The Chinese Postal Administration maintains 275 offices in the district, and international postal rates apply to all mail matter. On parcels by mail from the United States via Indo-China the addressee must pay a tax of 50 cents (Yunnan) per parcel irrespective of weight. The weight limit is 22 pounds for steam-served places and 11 pounds for places reached only by courier service.

SHIPPING AND WAREHOUSING FACILITIES

There are no public warehousing or storage facilities in the district. Goods are carried from the railway station either by porters or in small two-wheeled carts.

PUBLIC UTILITIES

ELECTRIC-LIGHT PLANTS

The following table shows the location, capacity, rates, and character of equipment of the principal electric-light plants in the district. They are all Chinese owned.

Location	Kilowatt lighting load	Kilowatt power load	Rates ¹	Character and nationality of equipment
			<i>Per kilowatt hour</i>	
Yunnanfu.....	500	150	\$0.11	Alternating current, 3 phase, 60 cycles; German.
Mengtsz.....	88	.....	.12	Alternating current, 3 phase, 60 cycles; British.
Linanfu.....	45	.....	.11	Alternating current, 3 phase, 60 cycles; American.
Amichow.....	20	.....	.11	Alternating current, 3 phase, 60 cycles; British.
Hokow.....	18.4	.....	2.54	Direct current, 2-wire system; American dynamo.

¹ Rates are in United States currency.

² Rate per lamp.

The Yunnanfu plant—Yao Lung Electric Lighting Co., capital now \$1,000,000 Yunnan (\$385,000 United States currency)—is being extended by the addition of two generators of 350 kilovolt-amperes each, together with complementary equipment, all German.

WATERWORKS

The plant of the Waterworks Co. (Chinese), at Yunnanfu, has a capacity of 30,000 gallons per hour. Its meter rate is 10 cents (about 4 cents United States currency) per 100 gallons. The equipment comprises two motor engines of 40 horsepower each for pumping the water 500 meters to the reservoir. The capacity of the plant is too small, and water is usually turned off during the night. A small lake in the city furnishes the water supply. There is also a very small waterworks plant at Kochiu.

FOREIGN TRADE

The value of the foreign trade of the three principal ports in Yunnan for 1913 and 1923 may be summarized as follows:

Port	Exports		Imports		Total	
	1913	1923	1913	1923	1913	1923
Mengtsz.....	\$8,200,106	\$7,442,917	\$6,381,971	\$11,746,638	\$14,582,077	\$19,189,555
Szemaao.....	29,165	35,285	137,003	151,495	166,168	186,780
Tengyueh.....	541,135	1,264,785	1,779,732	1,946,382	2,320,867	3,211,167

NOTE.—Values are converted to United States currency from haikwan taels at the rate of \$0.741 in 1913 and \$0.8231 in 1923.

Attention should be drawn to the completion of the Yunnan Railway in 1910, the effect of which was immediately shown in increased trade, which was especially marked in exports.

Szemaao.—The trade of this port, largely with Burma, has varied little during the past 20 years. Its chief import is raw cotton (\$31,861 in 1923) and its chief export black tea (\$10,904 in 1923).

Tengyueh.—Although the trade of this port has increased considerably, it is still relatively small and is entirely with Burma. The principal imports are cotton yarn and raw cotton. The principal exports in 1923 were raw silk (from Szechwan), 363,733 pounds, valued at \$984,823, and orpiment, 905,467 pounds, valued at \$77,770.

EXPORTS

The quantity and value of exports through the port of Mengtsz for the years 1913 and 1923 are shown in the following table:

Item	1913		1923	
	Quantity	Value	Quantity	Value
Bristles.....pounds..	28,000	\$6,605	220,667	\$135,194
Hides.....do.....	1,136,133	117,052	789,067	154,087
Leather.....do.....	15,067	4,888	146,933	106,000
Goat skins.....pieces..	2,800	883	293,180	107,344
Tin slabs.....short tons..	8,553	7,769,312	8,743	6,397,878

Tin in slabs has always constituted the premier export of this Province. Opium, of some importance in 1903, did not figure in the returns of 1913 nor of 1923 owing to the official prohibition of its cultivation. Leather exports, mostly low-grade products, and bristles have become important only in recent years.

It was estimated that in 1923 about 40 per cent of the exports of tin were shipped to the United States, 16 per cent to Japan, 5 per cent to Great Britain, and most of the remainder to ports of China. Yunnan bristles are shipped directly and indirectly to the United States, while some goatskins and hides from this district are believed to reach the American market. Leather is exported to China coast ports.

Customs policy.—Chinese goods shipped via Tonkin—all foreign trade goes by that route—are granted by treaty a special reduction

in the Chinese export duties amounting to 40 per cent of the prescribed duty.

Chinese merchandise transported across Tonkin to a foreign destination is subject to French transit dues amounting to 20 per cent of the duty provided in the customs tariff of Indo-China. There are additional nominal charges—statistical, seal, stamps on bill of lading and customs document—besides dock taxes and toll amounting to 0.45 piaster per metric ton on exports.

IMPORTS

The quantity and value of the principal imports through the port of Mengtsz for the years 1913 and 1923 are shown in the following table:

Item	1913		1923	
	Quantity	Value	Quantity	Value
Cigarettes.....	55,366	\$60,094	6,080	\$30,370
.....(thousands.....				
.....(pounds.....			797,467	406,620
Cotton yarn.....	16,543,600	3,025,433	19,697,600	6,283,624
.....(pounds.....				
Dyed cottons.....	26,672	263,373	84,455	554,027
.....(pieces.....				
Kerosene.....	947,360	206,314	1,200,020	411,389
.....(gallons.....				
Tobacco, prepared.....	958,267	167,487	522,667	148,914
.....(pounds.....				

The principal imports of 1913 in order of importance were as follows: Cotton yarn, rice (18,924,533 pounds, valued at \$507,553), dyed cottons, kerosene, and prepared tobacco. In 1923 the paper trade (\$180,561) slightly exceeded that of tobacco on account of a large import of unsigned bank notes (\$48,831). The chief item in this trade is Chinese joss paper.

Except postal parcels containing miscellaneous articles (\$120,800), the only direct import from Chinese ports is cigarettes—Shanghai cigarette factory products, which amounted to 797,467 pounds, valued at \$406,620, in 1923. The other cigarettes are foreign, chiefly British and French (Indo-China). About 78 per cent of the yarn imports, used chiefly for making coarse native cloth, are British, 10 per cent Japanese, and the remainder from Indo-China and Shanghai. The great bulk of this import is in No. 10s. Dyed cottons—chiefly Japanese and some British—comprise italians, venetians, lastings, and poplins, plain fast black, plain colored (chief items plain colored italians and lastings), and figured. The kerosene imports, which in 1903 were entirely American, were about 70 per cent American in 1923. The prepared tobacco is entirely Chinese, imports coming chiefly from Kwangtung and Fukien Provinces via Hongkong.

Among the American goods on this market, there are, besides kerosene, household stores (provisions); metals, such as nails, galvanized iron wire, and bamboo steel; electrical materials and fittings; flour; dried fruits; machinery; sewing and knitting machines; lubricating oil; photographic materials; telephone materials; and hand tools.

Customs policy.—Foreign goods shipped via Tonkin are granted by treaty a special reduction in Chinese import duties amounting to 30 per cent of the prescribed duty. However, this reduction does not apply to the Chinese transit dues.

Merchandise of foreign origin, other than French, transported across Tonkin is subject to French transit dues amounting to 20 per cent of the duty provided in the customs tariff of Indo-China. French goods, however, are imported into Indo-China free of duty and consequently are not subject to transit dues when transported across Tonkin to Yunnan. Besides transit dues, there are a number of nominal customs and other charges levied on all shipments, such as statistical, seal, stamps on bill of lading and customs documents, and dock taxes and toll amounting to about 1 piaster per metric ton on imports.

Transportation.—Shipments from the United States can be made to Haifong, Indo-China, via Hongkong, on through bills of lading. Between Hongkong and Haifong there are regular and frequent steamer services. At the latter port the assistance of a forwarding agent is required for attending to the customs formalities and transshipment by railway (Haifong-Yunnanfu).

BANKING AND CURRENCY

BANKS

The Banque de l'Indo Chine (paid up capital 68,400,000 francs), a French bank with its head office in Paris, maintains branches in Mengtze and Yunnanfu.

Exchange at Yunnanfu is confined almost entirely to transactions in Hongkong dollars, Shanghai dollars, and Indo-China piasters. Exchange on France is handled by the local bank, but on the United States references to Haifong or Hanoi branches are necessary. Except on France there is practically no foreign-exchange business here.

LOCAL CURRENCIES

Bank notes, chiefly the issues of the Fukien (provincial) Bank and the small issues of the Bank of Territorial Development and the Kopei Railway Bank, are restricted in their circulation. Silver coins, much below the official standard in silver, have been minted in the past few years, but are now rarely seen in Yunnanfu and the larger centers. The use of the Fukien bank notes is being enforced throughout the Province; consequently silver is becoming scarcer and the exchange of notes for silver is being severely restricted. The currency is naturally depreciating. There are no foreign bank notes in circulation.

The unfavorable exchange on Hongkong—exchange transactions are largely on that port—during the past few years has had a deterrent effect on imports.

ADVERTISING AND MERCHANDISING

Local newspapers are of limited usefulness as advertising mediums. Pictorial posters are probably the most effective. Printed or painted advertisements should, where practicable, give a pictorial representation of the article and the trade-mark, or chop. There is no tax on poster advertising. Firms filing their catalogues with the consulate should give the names and addresses of their far eastern representatives, so that inquirers may be referred to them.

The foreign trade of the Province is very largely handled by Chinese merchants who are not in a position to do business with western countries. Except French goods, bought in Tonkin, purchases of foreign goods are made chiefly in Hongkong and Shanghai. There are only a few foreign general merchants here—no Americans. In view of the limited facilities for local representation, interested American firms will usually be obliged to get in touch with this market through their Hongkong connections.

TRAVEL FACILITIES AND HOTELS

In Yunnanfu the Hotel du Commerce, under French ownership, has 24 rooms, and the rates are \$3 per day and up, American plan. The Hotel de la Gare, in Amichow, and the Hotel Kalos, in Mengtze, are both owned by Greeks, and their rates are somewhat lower than the hotel in Yunnanfu. During the summer season hotel accommodations should be engaged in advance, as many French people from Indo-China come to Yunnan to escape the heat.

There are two night stopping places on the train journey between Haifong and Yunnanfu, the first one at Laokay, on the Yunnan border, and the other at Amichow. Passengers must spend the night at the hotel, and while there should arrange for luncheon on the train next day, as the railway company furnishes no restaurant facilities.

Commercial travelers whose business is with the Chinese would do well to bring a Mandarin-speaking interpreter with them. Very few of the Chinese business men speak any language but Chinese. Commercial travelers should call at the consulate for information regarding local conditions.

TRADE ORGANIZATIONS

There are two trade organizations in Yunnanfu—the Yunnan General Chamber of Commerce (Chinese) and the French Chamber of Commerce. Neither of these organizations conduct any special service for the development of foreign trade. The Chinese chamber is the organization with which the Government deals in matters relating to the merchants. It is frequently used by merchants as an arbitration tribunal for disputes involving its members.

PROPERTY VALUES AND RENTS

As this is not an open port, foreign merchants can not buy property. Only Chinese buildings are available for renting, and rents have increased considerably during recent years. A compound containing between 10 and 15 rooms, besides quarters for servants, will rent for \$1,200 to \$2,400 Yunnan (\$462 and \$924 United States currency) a year. It is the custom among Chinese tenants to pay a deposit, which is not returned until the building is vacated.

There are no taxes that foreign tenants are required to pay.

CHANGES IN TRADE CONDITIONS IN RECENT YEARS

Beginning with 1910, exports exceeded imports every year until 1921, the excess in 1917 being approximately 7,000,000 taels. During 1921, 1922, and 1923 the excess of imports over exports amounted roughly to 4,000,000, 3,700,000, and 5,200,000 million taels, respec-

tively, or a total of nearly 13,000,000 taels. This adverse trade balance is undoubtedly one of the causes of the depreciation of Yunnan currency during these three years. Imports increased in these years—11,164,849, 12,981,886, and 14,271,216 haikwan taels in 1921, 1922, and 1923, respectively—the last year being the record, while exports decreased—7,156,397, 9,240,969, and 9,042,543 taels, respectively. In 1923 exports were more than 3,800,000 taels less than the record of 1917 (12,865,668 taels).

The export of tin in slabs for the 10 years ended in 1923 averaged 137,184 piculs a year and reached its maximum in 1917, with 185,634 piculs, valued at 11,579,628 taels. Since then the export of tin has fallen below the average in the years 1918, 1921, and 1923.

Other metals exported in some quantity during the past decade were as follows: Zinc, 30,050 piculs, valued at 317,775 taels, and 12,946 piculs, valued at 103,599 taels, in 1915 and 1921, respectively; lead, 13,236 piculs, valued at 174,694 taels, and 10,237 piculs, valued at 133,596 taels, in 1916 and 1917, respectively; and antimony, 8,118 piculs, valued at 77,126 taels, in 1915. The total export of antimony regulus between 1913 and 1917, when it practically ceased, was 24,133 piculs.

Under the impetus of a strong demand and high prices, untanned goatskins were exported in 1919 to the extent of 1,084,400 pieces, valued at 588,980 taels. The 1921 export was also unusually large, consisting of 714,922 pieces, valued at 299,601 taels. Cow and buffalo hides, undressed, were exported in exceptional quantities in 1919 and 1920, the figures for these two years being 13,029 piculs, valued at 368,432 taels, and 10,605 piculs, valued at 338,208 taels.

During the years 1913 to 1923 cotton yarn imports increased, ranging between 96,529 piculs, valued at 5,318,348 taels, in 1919, and 147,732 piculs, valued at 7,634,096 taels, in 1923. A marked expansion has occurred in dyed cottons, especially during the past few years, and Japanese goods have largely displaced British goods.

The cigarette trade, which amounted in 1918 to 201,193,000, valued at 343,429 taels, has made rapid strides during the past few years. Beginning with 1919 the great bulk of the imports—3,218 piculs, valued at 418,362 taels—entered the district as native goods, the product of modern factories at Shanghai. The heavy transit dues on foreign-made cigarettes crossing Tonkin (Chinese-made cigarettes if shipped direct to Haifong are subject to much lower transit dues—2 per cent ad valorem) confine the trade largely to native goods.

American products have supplied the bulk of the kerosene imports during recent years. Prior to 1922 the only year in which imports exceeded 1,000,000 gallons was 1915, when they amounted to 1,057,300 gallons, valued at 337,012 taels. In 1922 imports reached 1,331,590 gallons, valued at 595,762 taels, the record.

Among other imports, medicines and household stores may be briefly mentioned. The trade in medicines—94,366 and 178,027 taels in 1913 and 1923, respectively—is growing and is now confined chiefly to products prepared in Shanghai and Hongkong. Household stores were valued at 105,555 taels in 1923, as compared with an average of 48,660 taels for the preceding 10 years. American canned provisions figure prominently in this import trade.

APPENDIX

CHINA TRADE ACT, 1922, AS AMENDED BY THE ACT OF FEBRUARY 26, 1925

AN ACT To authorize the creation of corporations for the purpose of engaging in business within China

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "China Trade Act, 1922."

DEFINITIONS

SEC. 2. When used in this Act, unless the context otherwise indicates,—

(a) The term "person" includes individual partnership, corporation, and association;

(b) The term "China" means (1) China including Manchuria, Thibet, Mongolia, and any territory leased by China to any foreign government, (2) the Crown Colony of Hongkong, and (3) the Province of Macao;

(c) That terms "China Trade Act corporation" and "corporation" mean a corporation chartered under the provisions of this Act;

(d) The term "federal district court" means any federal district court, the United States Court for China, and the Supreme Court of the District of Columbia;

(e) The term "Secretary" means the Secretary of Commerce; and

(f) The term "registrar" means the China Trade Act registrar appointed under section 3.

REGISTRAR

SEC. 3. The Secretary is authorized to designate as China Trade Act registrar an officer of the Department of Commerce. The official station of the registrar shall be in China at a place to be designated by the Secretary. All functions vested in the registrar by this Act shall be administered by him under the supervision of the Secretary; except that upon appeal to the Secretary, in such manner as he shall by regulation prescribe, any action of the registrar may be affirmed, modified, or set aside by the Secretary as he deems advisable.

ARTICLES OF INCORPORATION

SEC. 4. (a) Three or more individuals (hereinafter in this Act referred to as "incorporators"), a majority of whom are citizens of the United States, may, as hereinafter in this Act provided, form a District of Columbia corporation for the purpose of engaging in business within China.

(b) The incorporators may adopt articles of incorporation which shall be filed with the Secretary at his office in the District of Columbia and may thereupon make application to the Secretary for a certificate of incorporation in such manner and form as shall be by regulation prescribed. The articles of incorporation shall state—

(1) The name of the proposed China Trade Act corporation, which shall end with the legend, "Federal Inc. U. S. A." and which shall not, in the opinion of the Secretary, be likely in any manner to mislead the public;

(2) The location of its principal office, which shall be in the District of Columbia;

(3) The particular business in which the corporation is to engage;

(4) The amount of the authorized capital stock, the designation of each class of stock, the terms upon which it is to be issued, and the number and par value of the shares of each class of stock;

(5) The duration of the corporation, which may be for a period of not more than twenty-five years, but which may, upon application of the corporation and payment of the incorporation fee, be successively extended by the Secretary for like periods;

(6) The names and addresses of at least three individuals (a majority of whom, at the time of designation and during their term of office, shall be citizens of the United States), to be designated by the incorporators, who shall serve as temporary directors; and

(7) The fact that an amount equal to 25 per centum of the amount of the authorized capital stock has been in good faith subscribed to.

(c) A China Trade Act corporation shall not engage in the business of discounting bills, notes, or other evidences of debt, of receiving deposits, of buying and selling bills of exchange, or of issuing bills, notes, or other evidences of debt, for circulation as money; nor engage in any other form of banking business; nor engage in any form of insurance business; nor engage in, nor be formed to engage in, the business of owning or operating any vessel, unless the controlling interest in such corporation is owned by citizens of the United States, within the meaning of section 2 of the Shipping Act, 1916, as amended.

(d) No certificate of incorporation shall be delivered to a China Trade Act corporation and no incorporation shall be complete until at least 25 per centum of its authorized capital stock has been paid in in cash, or, in accordance with the provisions of section 8, in real or personal property which has been placed in the custody of the directors, and such corporation has filed a statement to this effect under oath with the registrar within six months after the issuance of its certificate of incorporation, except that the registrar may grant additional time for the filing of such statement upon application made prior to the expiration of such six months. If any such corporation transacts business in violation of this subdivision or fails to file such statement within six months, or within such time as the registrar prescribes upon such application, the registrar shall institute proceedings under section 14 for the revocation of the certificate.

CERTIFICATE OF INCORPORATION

SEC. 5. The Secretary shall, upon the filing of such application, issue a certificate of incorporation certifying that the provisions of this Act have been complied with and declaring that the incorporators are a body corporate, if (a) an incorporation fee of \$100 has been paid him; (b) he finds that the articles of incorporation and statements therein conform to the requirements of, and that the incorporation is authorized by, this Act; and (c) he finds that such corporation will aid in developing markets in China for goods produced in the United States. A copy of the articles of incorporation shall be made a part of the certificate of incorporation and printed in full thereon. Any failure, previous to the issuance of the certificate of incorporation, by the incorporators or in respect to the application for the certificate of incorporation, to conform to any requirement of law which is a condition precedent to such issuance, may not subsequent thereto be held to invalidate the certificate of incorporation or alter the legal status of any act of a China Trade Act corporation, except in proceedings instituted by the registrar for the revocation of the certificate of incorporation.

GENERAL POWERS

SEC. 6. In addition to the powers granted elsewhere in this Act, a China Trade Act corporation—

(a) Shall have the right of succession during the existence of the corporation;

(b) Shall have a corporate seal and may, with the approval of the Secretary, alter it;

(c) May sue and be sued;

(d) Shall have the right to transact the business authorized by its articles of incorporation and such further business as is properly connected therewith or necessary and incidental thereto;

(e) May make contracts and incur liabilities;

(f) May acquire and hold real or personal property, necessary to effect the purpose for which it is formed, and dispose of such property when no longer needed for such purposes;

(g) May borrow money and issue its notes, coupon or registered bonds, or other evidences of debt, and secure their payment by a mortgage of its property; and

(h) May establish such branch offices at such places in China as it deems advisable.

SHARES OF STOCK

SEC. 7. Each share of the original or any subsequent issue of stock of a China Trade Act corporation shall be issued at not less than par value, and shall be paid for in cash, or in accordance with the provisions of section 8, in real or personal property which has been placed in the custody of the directors. No such share shall be issued until the amount of the par value thereof has been paid the corporation; and when issued, each share shall be held to be full paid and nonassessable; except that if any share is, in violation of this section, issued without the amount of the par value thereof having been paid to the corporation, the holder of such share shall be liable in suits by creditors for the difference between the amount paid for such share and the par value thereof.

SEC. 8. No share of stock of a China Trade Act corporation shall, for the purposes of section 7 or of paragraph (7) of subdivision (b) of section 4, be held paid in real or personal property unless (1) a certificate describing the property and stating the value at which it is to be received has been filed by the corporation with the Secretary or the registrar in such manner as shall be by regulation prescribed, and a fee to be fixed by the Secretary or the registrar, respectively, to cover the cost of any necessary investigation has been paid, and (2) the Secretary or the registrar, as the case may be, finds and has certified to the corporation that such value is not more than the fair market value of the property.

BY-LAWS

SEC. 9. The by-laws may provide—

(a) The time, place, manner of calling, giving notice, and conduct of, and determination of a quorum for the meetings, annual or special, of the stockholders or directors;

(b) The number, qualifications, and manner of choosing and fixing the tenure of office and compensation of all directors; but the number of such directors shall be not less than three, and a majority of the directors, and the president and the treasurer, or each officer holding a corresponding office, shall, during their tenure of office, be citizens of the United States resident in China.

(c) The manner of calling for and collecting payments upon shares of stock, the penalties and forfeitures for nonpayment, the preparation of certificates of the shares, the manner of recording their sale or transfer, and the manner of their representation at stockholders' meetings.

STOCKHOLDERS' MEETINGS

SEC. 10. (a) Within six months after the issuance of the certificate of incorporation of a China Trade Act corporation there shall be held a stockholders' meeting either at the principal office or a branch office of the corporation. Such meeting shall be called by a majority of the directors named in the articles of incorporation and each stockholder shall be given at least ninety days' notice of the meeting either in person or by mail. The holders of two-thirds of the voting shares, represented in person or by proxy, shall constitute a quorum at such meetings authorized to transact business. At this meeting or an adjourned meeting thereof a code of by-laws for the corporation shall be adopted by a majority of the voting shares represented at the meeting.

(b) The following questions shall be determined only by the stockholders at a stockholders' meeting:

- (1) Adoption of the by-laws;
- (2) Amendments to the articles of incorporation or by-laws;
- (3) Authorization of the sale of the entire business of the corporation or of an independent branch of such business;
- (4) Authorization of the voluntary dissolution of the corporation; and

(5) Authorization of application for the extension of the period of duration of the corporation.

(c) The adoption of any such amendment or authorization shall require the approval of at least two-thirds of the voting shares. No amendment to the articles of incorporation or authorization for dissolution or extension shall take effect until (1) the corporation files a certificate with the Secretary stating the action taken, in such manner and form as shall be by regulations prescribed, and (2) such amendment or authorization is found and certified by the Secretary to conform to the requirements of this Act.

(d) A certified copy of the by-laws and amendments thereof and of the minutes of all stockholders' meetings of the corporation shall be filed with the registrar.

DIRECTORS

SEC. 11. The directors designated in the articles of incorporation shall, until their successors take office, direct the exercise of all powers of a China Trade Act corporation except such as are conferred upon the stockholders by law or by the articles of incorporation or by-laws of the corporation. Thereafter the directors elected in accordance with the by-laws of the corporation shall direct the exercise of all powers of the corporation except such as are so conferred upon the stockholders. In the exercise of such powers the directors may appoint and remove and fix the compensation of such officers and employees of the corporation as they deem advisable.

REPORTS AND INSPECTION OF RECORDS

SEC. 12. (a) For the purpose of this Act the fiscal year of a China Trade Act corporation shall correspond to the calendar year. The corporation shall make and file with the registrar, in such manner and form and at such time as shall be by regulation prescribed, a report of its business for each such fiscal year and of its financial condition at the close of the year. The corporation shall furnish a true copy of the report to each of its stockholders.

(b) The registrar shall file with the Secretary copies of all reports, certificates, and certified copies received or issued by the registrar under the provisions of this Act. The Secretary shall file with the registrar copies of all applications for a certificate of incorporation, and certificates received or issued by the Secretary under the provisions of this Act. All such papers shall be kept on record in the offices of the registrar and the Secretary, and shall be available for public inspection under such regulations as may be prescribed.

DIVIDENDS

SEC. 13. Dividends declared by a China Trade Act corporation shall be derived wholly from the surplus profits of its business.

REVOCATION OF CERTIFICATE OF INCORPORATION

SEC. 14. The registrar may, in order to ascertain if the affairs of a China Trade Act corporation are conducted contrary to any provision of this Act, or any other law, or any treaty of the United States, or the articles of incorporation or by-laws of the corporation, investigate the affairs of the corporation. The registrar, whenever he is satisfied that the affairs of any China Trade Act corporation are or have been so conducted, may institute in the United States Court for China proceedings for the revocation of the certificate of incorporation of the corporation. The court may revoke such certificate if it finds the affairs of such corporation have been so conducted. Pending final decision in the revocation proceedings the court may, at any time, upon application of the registrar or upon its own motion, make such orders in respect to the conduct of the affairs of the corporation as it deems advisable.

SEC. 15. (a) For the efficient administration of the functions vested in the registrar by this Act, he may require, by subpoena issued by him or under his direction, (1) the attendance of any witness and the production of any book, paper, document, or other evidence from any place in China at any designated place of hearing in China, or, if the witness is actually resident or temporarily sojourning outside of China, at any designated place of hear-

ing within fifty miles of the actual residence or place of sojourn of such witness, and (2) the taking of a deposition before any designated person having power to administer oaths. In the case of a deposition the testimony shall be reduced to writing by the person taking the deposition or under his direction, and shall then be subscribed by the deponent. The registrar, or any officer, employee, or agent of the United States authorized in writing by him, may administer oaths and examine any witness. Any witness summoned or whose deposition is taken under this section, shall be paid the same fees and mileage as are paid witnesses in the courts of the United States.

(b) In the case of failure to comply with any subpoena or in the case of the contumacy of any witness before the registrar, or any individual so authorized by him, the registrar or such individual may invoke the aid of any Federal district court. Such court may thereupon order the witness to comply with the requirements of such subpoena and to give evidence touching the matter in question. Any failure to obey such order may be punished by such court as a contempt thereof.

(c) No person shall be excused from so attending and testifying or deposing, nor from so producing any book, paper, document, or other evidence on the ground that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to a penalty or forfeiture; but no natural person shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction, matter or thing as to which, in obedience to a subpoena and under oath, he may so testify, except that no person shall be exempt from prosecution and punishment for perjury committed in so testifying.

(d) For the efficient administration of the functions vested in the registrar by this Act, he, or any officer, employee, or agent of the United States authorized in writing by him, shall at all reasonable times for the purpose of examination have access to and the right to copy any book, account, record, paper, or correspondence relating to the business or affairs of a China Trade Act corporation. Any person who upon demand refuses the registrar or any duly authorized officer, employee, or agent such access or opportunity to copy, or hinders, obstructs, or resists him in the exercise of such right, shall be liable to a penalty of not more than \$5,000 for each such offense. Such penalty shall be recoverable in a civil suit brought in the name of the United States.

SEC. 16. In case of the voluntary dissolution of a China Trade Act corporation or revocation of its certificate of incorporation, the directors of the corporation shall be trustees for the creditors and stockholders of the corporation; except that upon application to the United States Court for China by any interested party, or upon the motion of any court of competent jurisdiction in any proceeding pending before it, the court may in its discretion appoint as the trustees such persons, other than the directors, as it may determine. The trustees are invested with the powers, and shall do all acts, necessary to wind up the affairs of the corporation and divide among the stockholders according to their respective interests the property of the corporation remaining after all obligations against it have been settled. For the purposes of this section the trustees may sue and be sued in the name of the corporation and shall be jointly and severally liable to the stockholders and creditors of the corporation to the extent of the property coming into their hands as trustees.

REGULATIONS

SEC. 17. (a) The Secretary is authorized to make such regulations as may be necessary to carry into effect the functions vested in him or in the registrar by this Act.

(b) That the Secretary is authorized to prescribe and fix the amount of such fees (other than the incorporation fee) to be paid him or the registrar for services rendered by the Secretary or the registrar to any person in the administration of the provisions of this Act. All fees and penalties paid under this Act shall be covered into the Treasury of the United States as miscellaneous receipts.

PENALTIES

SEC. 18. No stockholder, director, officer, employee, or agent of a China Trade Act corporation shall make, issue, or publish any statement, written or oral, or advertisement in any form, as to the value or as to the facts

affecting the value of stocks, bonds, or other evidences of debt, or as to the financial condition or transactions, or facts affecting such condition or transactions, of such corporation if it has issued or is to issue stocks, bonds, or other evidences of debt, whenever he knows or has reason to believe that any material representation in such statement or advertisement is false. No stockholder, director, officer, employee, or agent of a China Trade Act corporation shall, if all the authorized capital stock thereof has not been paid in, make, issue, or publish any written statements or advertisement, in any form, stating the amount of the authorized capital stock without also stating as the amount actually paid in, a sum not greater than the amount paid in. Any person violating any provisions of this section shall, upon conviction thereof, be fined not more than \$5,000 or imprisoned not more than ten years, or both.

SEC. 19. No individual, partnership, or association, or corporation not incorporated under this Act or under a law of the United States, shall engage in business within China under a name in connection with which the legend "Federal Inc. U. S. A." is used. Any person violating this section shall upon conviction thereof be fined not more than \$1,000 for each violation.

JURISDICTION OF SUITS AGAINST CORPORATION

SEC. 20. (a) That the Federal district courts shall have exclusive original jurisdiction of all suits (except as provided by the Act entitled "An Act creating a United States Court for China and prescribing the jurisdiction thereof," approved June 30, 1906, as amended) to which a China Trade Act corporation, or a stockholder, director, or officer thereof in his capacity as such, is a party. Suit against the corporation may be brought in the United States Court for China, or in the Supreme Court of the District of Columbia, or in the Federal district court for any district in which the corporation has an agent and is engaged in doing business.

(b) Every China Trade Act corporation shall maintain in the District of Columbia a person as its accredited agent upon whom legal process may be served, in any suit to be brought in the Supreme Court of the District of Columbia, and who is authorized to enter an appearance in its behalf. In the event of the death or inability to serve, or the resignation or removal, of such person, such corporation shall, within such time as the Secretary by regulation prescribes, appoint a successor. Such corporation shall file with the Secretary a certified copy of each power of attorney appointing a person under this subdivision, and a certified copy of the written consent of each person so appointed.

Federal taxation

SEC. 21. Title II of the Revenue Act of 1921 is amended by adding at the end thereof a new section to read as follows:

"China trade act corporations"

"SEC. 264. (a) That for the purpose only of the tax imposed by section 230 there shall be allowed, in the case of a corporation organized under the China Trade Act, 1922, a credit of an amount equal to the proportion of the net income derived from sources within China (determined in a similar manner to that provided in section 217) which the par value of the shares of stock of the corporation owned on the last day of the taxable year by individual citizens of the United States or China, resident in China, bears to the par value of the whole number of shares of stock of the corporation outstanding on such date: Provided, That in no case shall the amount by which the tax imposed by section 230 is diminished by reason of such credit exceed the amount of the special dividend certified under subdivision (b) of this section.

"(b) Such credit shall not be allowed unless the Secretary of Commerce has certified to the commissioner (1) the amount which, during the year ending on the date of filing the return, the corporation has distributed as a special dividend to or for the benefit of such individuals as on the last day of the taxable year were citizens of the United States or China, resident in China, and owned shares of stock of the corporation, (2) that such special dividend was in addition to all other amounts, payable or to be payable to such individ-

uals or for their benefit, by reason of their interest in the corporation, and (3) that such distribution has been made to or for the benefit of such individuals in proportion to the par value of the shares of stock of the corporation owned by each; except that if the corporation has more than one class of stock, the certificate shall contain a statement that the articles of incorporation provide a method for the apportionment of such special dividend among such individuals, and that the amount certified has been distributed in accordance with the method so provided.

"(c) For the purposes of this section shares of stock of a corporation shall be considered to be owned by the person in whom the equitable right to the income from such shares is in good faith vested.

"(d) As used in this section the term 'China' shall have the same meaning as when used in the China Trade Act, 1922."

Sec. 22. Subdivision (b) of section 230 of the Revenue Act of 1921 is amended to read as follows:

"(b) For each calendar year thereafter, $12\frac{1}{2}$ per centum of the amount of the net income in excess of the credits provided in sections 236 and 264."

Sec. 23. Subdivision (f) of section 238 of the Revenue Act of 1921 is amended by adding after the figures "262" the word and figures "or 264."

Sec. 24. Subdivision (c) of section 240 of the Revenue Act of 1921 is amended by adding at the end thereof a new sentence to read as follows: "A corporation organized under the China Trade Act, 1922, shall not be deemed to be affiliated with any other corporation within the meaning of this section."

Sec. 25. That section 2 of the Revenue Act of 1921 is amended by adding at the end thereof a new paragraph to read as follows:

"(12) A corporation organized under the China Trade Act, 1922, shall, for the purposes of this Act, be considered a domestic corporation."

Sec. 26. Subdivision (b) of section 213 of the Revenue Act of 1921 is amended by striking out the period at the end of paragraph (12) thereof and inserting in lieu thereof a semicolon, and by adding after paragraph (12) a new paragraph to read as follows:

"(13) In the case of an individual, amounts distributed as dividends to or for his benefit by a corporation organized under the China Trade Act, 1922, if, at the time of such distribution, he is a citizen of China resident therein and the equitable right to the income of the shares of stock of the corporation is in good faith vested in him."

Sec. 27. Subdivision (a) of section 216, paragraph (6) of subdivision (a) of section 234, and paragraph (3) of subdivision (a) of section 245, of the Revenue Act of 1921, are amended by inserting in each after the word and figures "section 262" a comma and the words "and other than a corporation organized under the China Trade Act, 1922."

The Revenue Act of 1921 was amended by sections 21 to 27, inclusive, of the China Trade Act, 1922, and the amended sections were carried into the Revenue Act of 1924. Section 264 of the Revenue Act of 1921 was changed to 263 of the Revenue Act of 1924. Section 11 of the Act of February 26, 1925, amended section 263 of the Revenue Act of 1924 to read as follows:

"Sec. 263. (a) That for the purpose only of the tax imposed by section 230 there shall be allowed in the case of a corporation organized under the China Trade Act, 1922, a credit of an amount equal to the proportion of the net income derived from sources within China (determined in a similar manner to that provided in section 217) which the par value of the shares of stock of the corporation owned on the last day of the taxable year by (1) persons resident in China, the United States, or possessions of the United States, and (2) individual citizens of the United States or China wherever resident, bears to the par value of the whole number of shares of stock of the corporation outstanding on such date: *Provided*, That in no case shall the amount by which the tax imposed by section 230 is diminished by reason of such credit exceed the amount of the special dividend certified under subdivision (b) of this section.

"(b) Such credit shall not be allowed unless the Secretary of Commerce has certified to the commissioner (1) the amount which, during the year ending on the date fixed by law for filing the return, the corporation has distributed as a special dividend to or for the benefit of such persons as on the last day of the taxable year were resident in China, the United States, or possessions of the United States, or were individual citizens of the United States or China, and owned shares of stock of the corporation, (2) that such special dividend was, in addition to all other amounts, payable or to be payable to such persons

or for their benefit, by reason of their interest in the corporation, and (3) that such distribution has been made to or for the benefit of such persons in proportion to the par value of the shares of stock of the corporation owned by each; except that if the corporation has more than one class of stock, the certificates shall contain a statement that the articles of incorporation provide a method for the apportionment of such special dividend among such persons, and that the amount certified has been distributed in accordance with the method so provided."

Paragraph (13) of subdivision (b) of section 213 of the Revenue Act of 1924 was amended by section 12 of the Act of February 26, 1925, to read as follows:

"(13) In the case of a person, amounts distributed as dividends to or for his benefit by a corporation organized under the China Trade Act, 1922, if, at the time of such distribution, he is a resident of China and the equitable right to the income of the shares of stock of the corporation is in good faith vested in him."

RESERVATION OF RIGHT TO AMEND

SEC. 28. The Congress of the United States reserves the right to alter, amend, or repeal any provision of this Act.

SEC. 29. Hereafter no corporation for the purpose of engaging in business within China shall be created under any law of the United States other than the China Trade Act.

Approved September 19, 1922; amended by Act approved February 26, 1925.

REGULATIONS, CHINA TRADE ACT, 1922

The following regulations, effective immediately, are in accordance with the following sections of the above law, approved September 19, 1922, as amended.

SECTION 3.—*Appeal from decision of registrar*

1. Appeal from any decision of the registrar may be made direct to the Secretary, but only after due notice of the appeal has been filed with the registrar by the person appealing. No action shall be taken by the registrar pending the Secretary's decision.

2. A transcript of the record in each particular case of any controverted question, together with a copy of the registrar's decision, must accompany the appeal, with a certificate signed by the registrar that such transcript and decision are correct copies.

3. In case of any dispute on the above, resulting in the failure of the registrar to sign such certificate, he shall submit his reasons in full with documents supporting to the Secretary. The person making the appeal may do likewise, provided his statement is submitted under oath.

4. The decision of the Secretary will be communicated in writing independently to both the registrar and the person appealing as soon as practicable.

SECTION 4(B).—*Application for certificate of incorporation*

5. The application for certificate of incorporation of a China trade company shall contain the following information and be signed and sworn to, before a notarial officer of the United States or any State, by a majority of the incorporators. All such applications originating in China shall first be submitted to the registrar, who shall forward the same, together with his recommendation thereon, to the Secretary: upon presentation to the Secretary of an application originating in the United States the registrar will be advised and his recommendation obtained before action is taken. Copies of the certificate when issued are to be filed with the American Legation, Peking, and with the consular officers for the districts in which its main and branch offices or agencies in China are situated.

(1) Date of application.

(2) Place of application.

(3) Name and address of resident incorporator.

(4) Whether application for original or extended certificate.

(5) Names and addresses of incorporators.

(6) Reason, if any, for failure of any incorporators to sign.

- (7) Nationality of each incorporator by name.
- (8) In case of naturalized citizens a certificate of naturalization must accompany the application for each incorporator so naturalized.
- (9) Statement as to manner and extent proposed corporation will aid in the development of markets in China for goods produced in the United States.
- (10) Names and nationalities of stockholders with number of shares subscribed for by each.
- (11) Minutes of meeting adopting articles of incorporation.
- (12) Certificate by secretary of meeting regarding adoption of articles of incorporation, with certified copy of articles of incorporation signed and acknowledged by incorporators.
- (13) Signatures of incorporators.

SECTION 17(B).—*Registration fees*

6. The registration fees for China companies shall be as follows and shall accompany each application, except that for property value, which will be payable before certificate is issued:

Certificate of registration (as provided in sec. 5).....	\$100
Certificate of property value (as provided in sec. 8).....	{ maximum -- 300 minimum -- 25
(Fee based on value of property and investigation necessary in each case.)	
Certificate of amendment of articles of incorporation or authority for dissolution (as provided in sec. 10).....	100

7. The fees shall be payable in United States gold either in Shanghai, China, or in Washington, D. C., and shall be collected by the registrar or Secretary and turned over to any designated disbursing officer of the United States Treasury Department and handled by him in accordance with section 17 of the act.

SECTION 8.—*Certificate of property value*

8. The certificate of property value shall contain the following information signed and properly sworn to before a notarial officer of the United States or any State:

- (1) Date of certificate.
- (2) Names of owner of property.
- (3) Exact description and location of property, with list or schedule.
- (4) Cost of property at date of purchase.
- (5) Present liens or mortgages on property.
- (6) Statement of present value, supported by statements of two other persons verifying same with reasons for knowledge of value.
- (7) Signatures of three persons under oath.

SECTION 10(c).—*Certificate of amendment of articles of incorporation or authorization for dissolution or extension*

9. The certificate of amendment of articles of incorporation or authorization for dissolution or extension shall contain the following information, signed by a majority of the directors and properly sworn to before a notarial officer of the United States or any State by the secretary of the meeting:

- (1) Date of certificate.
- (2) Date of meeting authorizing action.
- (3) Total number of stockholders.
- (4) Total number empowered to vote.
- (5) Number of stockholders attending meeting.
- (6) Number of stockholders voting for action.
- (7) Signature of above majority of directors and secretary of the meeting.

SECTION 12 (A).—*Annual report*

10. The annual report of companies operating under this act shall be for the year ending December 31 and shall consist of the following, subscribed to under oath by the secretary of the corporation:

- (1) The minutes of the stockholders' meeting approving the balance sheet for such fiscal year.
- (2) A certified copy of the balance sheet (as per specified form).
- (3) A detailed statement of profit and loss (as per specified form).
- (4) A statement of the distribution of profits.
- (5) Changes in list of stockholders during the year.

SECTION 12 (B).—*Inspection of records*

11. Application for inspection of reports, certificates, certified copies of applications, etc., may be made to the Secretary or registrar, and upon approval the applicant may inspect the papers specified. Such applications shall contain the following:

- (1) Name of company or companies registered.
- (2) List of titles of papers desired for inspection.
- (3) Reason for desiring to inspect same.
- (4) Certificate under oath that information will be held strictly confidential and not for publication or dissemination.
- (5) Signature of applicant and name of company (if any) which he represents.

HERBERT HOOVER,
Secretary of Commerce.

OCTOBER 20, 1922.

CHINESE WEIGHTS AND MEASURES

Early in their treaty relations with China, the foreign powers found it necessary to make definite stipulations regarding the equivalents of China's weights and measures as they affected foreign trade. It was found that while the units in the various Chinese communities were similar, the measures themselves varied greatly. The traveler in China finds a Chinese "li" or mile differing in different sections. The Chinese catty and picul, measures of weight, vary in different sections of the country. Foreigners find it very necessary in purchasing Chinese commodities from the Chinese, or in selling foreign products to the Chinese, to be certain that the weights and measures are definitely understood. In currency units it is particularly necessary that there be no misunderstanding, as every community has its own scales for weighing silver, which differ from those of other communities. The section in this handbook on Chinese currency explains in detail the currency standards in use in the country.

The regulations drafted in accord with the British treaty of 1842 with China stipulated regarding weights and measures that "sets of balance yards for the weighing of goods, of money weights, and of measures, prepared in exact conformity to those hitherto in use at the customhouse of Canton, and duly stamped and sealed in proof thereof, will be kept in possession of the superintendent of customs and also at the British consulate at each of the five ports (opened to trade by the treaty of 1842), and these shall be charged and all sums paid to the Government."

The British treaty of 1858 stipulated the following equivalents of weights and measures for customs purposes:

- 1 picul of 100 catties=133½ pounds avoirdupois.
- 1 chang of 10 Chinese feet=141 English inches.
- 1 chuh or Chinese foot=14.1 English inches.

The Chinese Government enacted a law in 1914 establishing a system of weights and measures and prescribed provisions for inspections and penalties. This law has not as yet been made effective. It prescribes the following units:

- Length*.—1 ch'ih=32 meters=1.049867 feet.
- Area*.—1 mow or 6,000 square ch'ih=0.06144 hectare=0.15182 acre.
- Capacity*.—1 sheng=10.354688 liters=10.9416 liquid quarts.
- Weight*.—1 liang=37.301 grams=1.31561 ounces avoirdupois.

Other measures in local use are:

- 10 li (lee)=1 fen (candereen).
- 10 fen=1 ch'ien.
- 10 ch'ien=1 liang (tael or ounce).
- 16 liang=1 chin (catty).
- 100 chin (gin)=1 tan (picul).

However, for purposes of foreign trade, the weights in common use are as follows:

- 1 liang=583.3 grains=1½ ounces avoirdupois=37.7839 grams.
- 16 liang=1 chin (gin) or catty.
- 1 chin or catty=1½ pounds or 604.53 grams.
- 100 chin or catties=1 tan or picul.
- 1 tan or picul=133½ pounds or 60.453 kilograms.

The measures of capacity in common use in China are:

- 10 ko=1 sheng.
- 10 sheng=1 tou.
- 10 tou=1 shih.

These measures also differ greatly in different parts of the country. The tou of the imperial granaries contained 5.1341 liters, while the common market tou contains 7.4059 liters. Measures of capacity are generally used only for rice and grains, which are also often sold by weight. Fluids are often weighed like any other merchandise. The American gallon has become an important measure, especially for petroleum. It contains 231 cubic inches. The British imperial gallon contains 277.462879 inches. An American weight gallon=6.5 pounds. The unit, however, for kerosene is 10 gallons=65 pounds.

The units of length in common use are:

- 10 fen=1 t'sun or inch.
- 10 t'sun=1 ch'ih or foot.
- 10 ch'ih=1 chang.
- 180 chang=1 li (lee).

For purposes of foreign computations for customs use, 1 ch'ih=14.1 inches, or 0.358 meters.

Thus theoretically 1 Chinese li (lee) is equivalent to two-fifths of an English statute mile. Among foreigners in China a "li" is generally considered as one-third of a mile, but as the "li" differs among different Chinese communities, it is not possible to give its exact equivalent.

It must also be borne in mind that each trade in China has its own ch'ih or foot measure, varying from the equivalent of 8.6 inches to 27.8 inches.

The units of area in common use are:

- | | |
|-------------------|-------------------------------|
| 10 ssu=1 hao. | 25 square ch'ih=1 pu or kung. |
| 10 hao=1 lee. | 240 pu=1 mow. |
| 10 lee=1 fen. | 100 mow=1 ch'ing. |
| 10 fen=1 mow. | |
| 100 mow=1 ch'ing. | |

Among foreigners the mow has come to be regarded as equivalent to one-sixth of an English acre of 43,560 square feet, but it varies greatly throughout China from one-twelfth to two-fifths of an acre.

For ready conversion, the following equivalents are commonly recognized:

WEIGHTS

- 1 short ton=15 piculs.
- 1 long ton=16 piculs=80 catties.
- 1 central or hundredweight=75 catties.
- 1 pound avoirdupois= $\frac{3}{4}$ catty or 12 taels.
- 4 ounces=3 taels.
- 1 picul=1.19047 hundredweight.
- 1 tael= $1\frac{1}{3}$ ounces=37.783 grams.
- 1 catty= $1\frac{1}{3}$ pounds=604.53 grams.

LINEAR AND SURFACE MEASURES

- 1 ch'ih=14.1 inches.
- 1 chang=141 inches or 11.75 feet.
- 1 li= $\frac{1}{3}$ of a mile.
- 1 mow= $\frac{1}{6}$ of an acre, or 7,260 square feet.

For currency equivalents, see chapter on "Currency, exchange, and banking."

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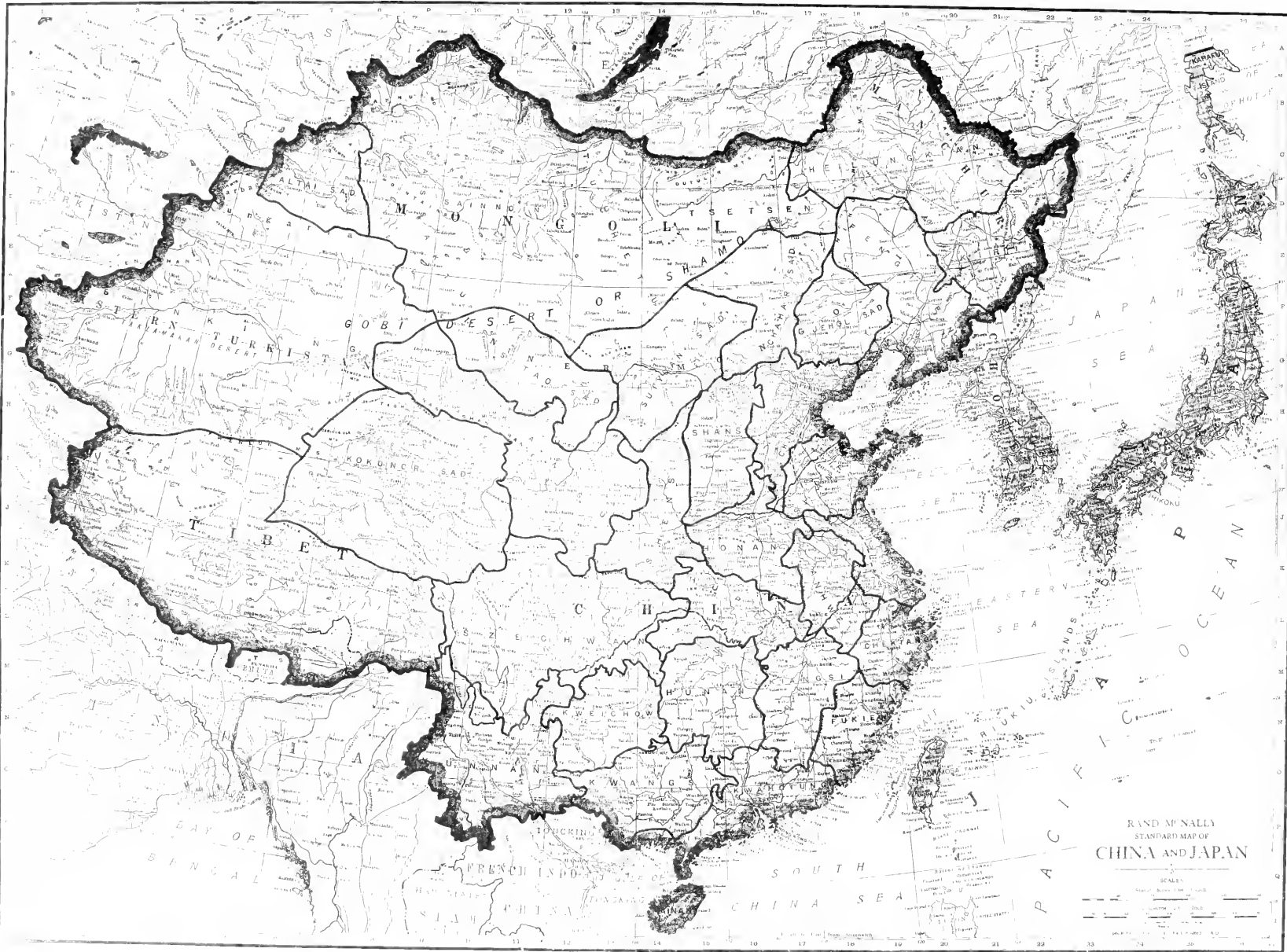
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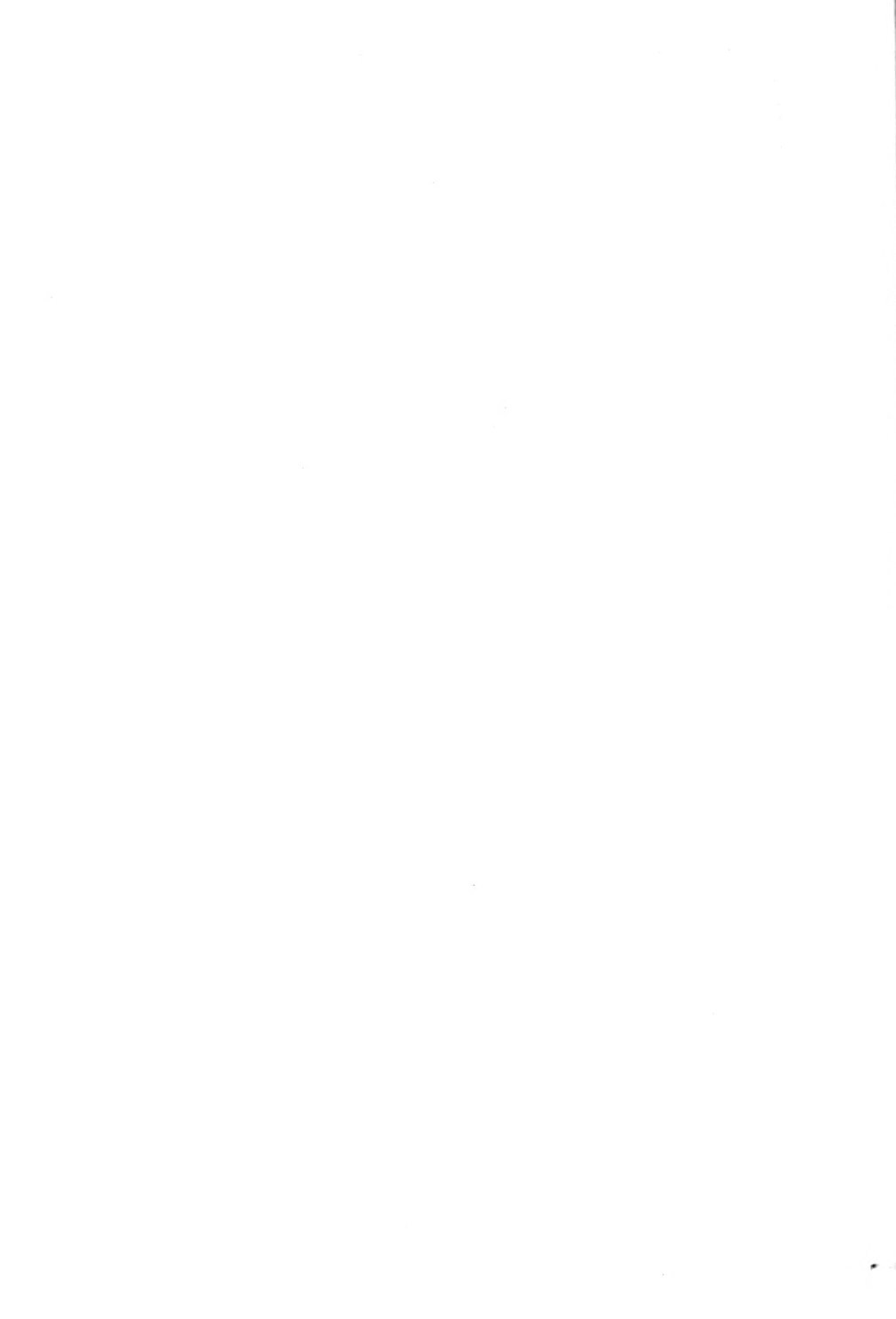
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